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Item 6 of the provisional agenda*

PROGRAMME MATTERS

Summary of UNEP Highlights of the Biennium 1994-1995

Note by the Executive Director

In accordance with Governing Council decision 17/37 of 21 May 1993, the Executive Director has the honour to submit herewith, for the information of the Governing Council at its nineteenth session, a brief summary of activities for the biennium 1994-1995. The publication entitled UNEP Highlights of the Biennium 1994-1995 provides a detailed and comprehensive overview of results. That report was issued in December 1995 and has been widely distributed.

The report differs from previous annual reports of the Executive Director in that it covers a biennium rather than a single year.

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Highlights of the Biennium 1994-1995

Summary

1. For UNEP, the 1994-1995 biennium was a transitional one. The organization has moved from a sectoral programme of work to one which provides a more integrated response. It has moved away from activity-reporting to the reporting of results.

2. For the biennium 1994-1995, the UNEP programme of work was structured according to the following principles: a management strategy focused on achieving results that satisfy needs, providing responsive services to the Governments and peoples of the world, forging partnerships with others who offer added value to the organization's own efforts, effective regional delivery, and better programme integration.

3. A brief summary of the key activities of the 13 subprogrammes of the 1994-1995 programme of work is presented below. A more comprehensive report, UNEP Highlights of the Biennium 1994-1995, is available from the secretariat.

A. Atmosphere

4. UNEP continued to contribute to the implementation of the Framework Convention on Climate Change, including co-sponsorship with World Meteorological Organization (WMO) of the work of the Intergovernmental Panel on Climate Change (IPCC) and coordination of a set of country case-studies under the World Climate Impact Assessment and Response Strategies Programme.

B. Freshwater Resources

5. UNEP intensified its innovative, catalytic role in promoting the environmentally-sustainable management and use of freshwater resources, particularly for transboundary watersheds, UNEP initiated diagnostic studies as part of its Environmentally-Sound Management of Inland Waters (EMINWA), published 10 scientific and technical books dealing with various aspects of the aquatic environment, and chaired the Water Working Group of the Secretary-General's Special Initiative for Africa.

C. Terrestrial Ecosystems

6. With respect to biodiversity, UNEP has implemented its Biodiversity Programme and Implementation Strategy (BPIS) in support of the Convention on Biological Diversity and, in cooperation with the Global Environment Facility (GEF), has supported three successful projects. UNEP participated, with the Food and Agriculture Organization of the United Nations (FAO), in the preparation of a forest policy and strategy paper and a review of the Forests Principles, three years after United Nations Conference on Environment and Development (UNCED). UNEP also continued its efforts on biodiversity conservation through its work with the World Conservation Monitoring Centre, FAO, and the World Conservation Union (IUCN). With regard to desertification control, UNEP played a significant role in the development, in June 1994, of the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa

and its desertification control subprogramme has been brought into line with the Convention.

D. Oceans and Coastal Areas

7. UNEP played a significant role in the adoption of the Action Plan for the Protection of the Coastal and Marine Environment of the North-West Pacific region, the creation of the thirteenth regional seas programme in the South-West Atlantic region and the adoption of the South-Asian Seas Action Plan. Considerable work also continued to be done within the context of the Living Marine Resources Programme. UNEP played a key role in the adoption of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities and was designated, in December 1995, to perform the secretariat function for the Global Programme of Action.

E. Health, Human Settlements and Welfare

8. UNEP, with its many partners, continued to promote a clearer understanding of the linkages between environment and health. Examples include: the preparation of an assessment of the possible health effects of climate change, the development of publications related to integrated pest management (Beyond Silent Spring and Integrated Pest Management in the Tropics), the Sustainable Cities Programme, and the establishment of a joint UNEP/Department of Humanitarian Affairs (DHA) Environment Unit.

F. Environmental Economics

9. UNEP initiated an action programme on the environment and economics in order to develop further and apply environmental economic tools for integrating environmental considerations into development planning and decision-making; to promote understanding of the implications of environmental standards, policies and agreements; and to promote complementarity between international environmental agreements and trade agreements.

G. Environmental Law

10. A major and continuing task has been the further development of environmental law under the Montevideo II Programme for the Development and Periodic Review of Environmental Law for the 1990s. Over 30 countries received technical assistance with the review, development or implementation of their environmental legislation and institutions. UNEP enhanced countries' environmental-law capacity through the UNEP/United Nations Institute for Training and Research (UNITAR) Global Training Course on Environmental Law and Policy, played a significant role in the conclusion of the Lusaka Agreement on Cooperative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora and embarked on preparations for the development of an international legally-binding instrument for applying the prior informed consent (PIC) procedure to certain hazardous chemicals in international trade.

H. Toxic Chemicals and Waste

11. UNEP advanced significantly, with FAO, the PIC programme, expanding the number of participating countries to 140, adding to the list of chemicals that are part of the procedure and promoting Government-to-Government information exchange on chemicals. With regard to persistent organic pollutants (POPs), UNEP has initiated the assessment process and established a working group aimed at producing an action plan to deal with POPs.

I. Industry and Energy

12. UNEP, through the organization of training events, publications, demonstration projects, operation of clearing-houses, and provision of financial and technical support, the increased awareness and enhanced capacity for cleaner production; increased information exchange for technology transfer; increased the number of countries with developed accident-prevention and emergency-response programmes; enhanced knowledge of environmental management and pollution control in various industrial sectors; enhanced responsible entrepreneurship and improved environmental management practices; and promoted the implementation of the Montreal Protocol through the OzonAction Programme.

J. Earthwatch

13. UNEP restructured its assessment subprogramme during the 1994-1995 biennium to place the emphasis on integration of the various programme components - Global Environment Monitoring System (GEMS), Global Resource Information Database (GRID), and Environment and Natural Resources Information Networking (ENRIN) - and on regionalization. The International Environment Information System (INFOTERRA) responded to 80,000 queries during the biennium. UNEP has signed a memorandum of understanding with the United Nations Development Programme (UNDP), linking INFOTERRA with the UNDP Sustainable Development Network Programme (SDNP). A partnership with IUCN was also established.

K. Capacity-Building

14. UNEP conducted 12 training courses in integrated environmental management, in which more than 300 officials from all over the world participated. UNEP promoted regional training networks in Asia and the Pacific, Latin America and the Caribbean, West Asia and Africa. In conjunction with the United Nations Educational, Scientific and Cultural Organization (UNESCO), the newsletter Connect was distributed to 20,000 addressees in eight languages. Nearly 40 grants were awarded in all six UNEP regions to qualifying projects under the UNEP Small Windows Projects in Environmental Education and Environmental Training.

L. Regional Cooperation

15. A major upgrading of the UNEP regional presence was undertaken through specific management action in the following areas: upgrading regional director reporting relationships; new regional director core functions; a new management strategy; regional emphasis in the programme of work and future programmes of work; and steps to improve the credibility and effectiveness of

regional offices. UNEP Highlights of the Biennium 1994-1995 reviews the activities of each of the UNEP six regions.

M. The core subprogramme (inter-agency affairs, information and public awareness, resource mobilization for environmental action and conference services)

16. UNEP undertook a number of initiatives to streamline and improve its coordinating role both within the United Nations system and with international financial institutions. The first meeting of the Inter-Agency Coordination Group (IAEG) was held in late 1994. With the approval of IAEG, UNEP began the development of a system-wide strategy in the field of the environment. During the biennium, UNEP also established a focal point on gender issues and a Gender Issues Board and played an active role in the preparations for and activities related to the Fourth World Conference on Women (Beijing Conference).

17. Among its many information and public-awareness efforts, UNEP published 10 issues of Our Planet; issued 140 press releases and 40 audio-visual kits and films with Television Trust for the Environment (TVE); supported the communications activities of all the UNEP programme areas; organized World Environment Day celebrations in London in 1994 and Pretoria in 1995; and played a key role in the International Children's Conference on the Environment.

18. During the biennium, the Clearing-house for Technical Cooperation mobilized resources additional to the UNEP Environment Fund to provide technical assistance to developing countries. Resources for eight projects given priority by developing countries were mobilized or brokered. An additional eight developing countries received technical assistance under an umbrella project funded by the Governments of Germany, Finland and Sweden.

19. Lastly, as regards conference services, several innovations were implemented, including the use of remote translation, reduction in the paper load for the Governing Council and other meetings, and the use of recycled paper.

N. New Developments

20. During the biennium, there were also a number of new developments in UNEP including operationalization of the International Environmental Technology Centre (IETC) offices at Osaka and Shiga, Japan; conclusion of an agreement with the European Space Agency to initiate the Mercure project; and establishment of a Corporate Planning and Accountability Service (CPAS).

O. International Environmental Conventions

21. Extensive work under each of the environmental conventions was undertaken during the biennium. For details of the progress made under each of the conventions, UNEP Highlights of the Biennium 1994-1995 may be consulted.

P. Global Environment Facility (GEF)

22. During the biennium, UNEP played an active role in the negotiations to restructure the GEF. It re-established the role of UNEP in the Facility and built upon its programme of activities to contribute to the GEF mandate to promote cooperation among developed and developing countries in addressing global issues in the focal areas of climate change, ozone depletion, biological diversity, international waters and land degradation.

Q. Funds and administration

23. The total financial contributions to UNEP for the biennium 1994-1995 stood at US$ 234 million, excluding the Multilateral Fund for the Implementation of the Montreal Protocol, and at US$ 485 million if the Multilateral Fund is taken into account. On 31 December 1995, there were 428 Professional posts approved (371 occupied) and 593 General Service posts approved (532 occupied).

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PREPARATIONS FOR THE 1997 REVIEW AND APPRAISAL OF AGENDA 21

Implementation by UNEP of Agenda 21

Note by the Executive Director

1. Further to General Assembly resolution 50/113 of 20 December 1995 on the special session for the purpose of an overall review and appraisal of the implementation of Agenda 21, the Executive Director has the honour to present herewith for the information of the Governing Council a synoptic report on the implementation by the United Nations Environment Programme of the follow-up to the United Nations Conference on Environment and Development (UNCED), encompassing Agenda 21, the Rio Declaration on Environment and Development and the Non-legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests.

2. The report is intended to be part of UNEP's submission to the Commission for Sustainable Development at its fifth session and the special session of the General Assembly for the purpose of an overall review and appraisal of the implementation of Agenda 21.

3. The essence of this report and lessons learned in the implementation process have been incorporated into the report of the Executive Director on UNEP's contribution to the special session of the General Assembly in 1997 (UNEP/GC.19/30).

4. The text has been edited for substance only.

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UNEP'S IMPLEMENTATION OF AGENDA 21

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UNEP's IMPLEMENTION OF AGENDA 21

I. Introduction

References: Chapter 1: Preamble; Rio Declaration: Principles: 1, 25.

1. The adoption by the United Nations General Assembly of the "Environmental Perspective to the year 2000 and Beyond", developed collectively by Governments under UNEP auspices, provided an internationally agreed policy framework for integration of the environment and development in decision-making and action. The adoption of Agenda 21 by UNCED provided the road map to implement sustainable development in which environmental, social and economic considerations blend in mutual support. The political will, expectations and momentum generated by Agenda 21, and the global environmental Conventions and principles agreed in Rio, helped pull the environment into the mainstream of decision-making on and assessment of development. For long the lone environmental monitor and advocate of environment at the global level, UNEP after 1992 could forge new partnerships, deepen collaborations, identify fresh opportunities to be more effective, and adjust its vision, mission, strategy and work to the changing context of international environment and development co-operation.

2. Agenda 21 broadly reinforced UNEP's original mandate and gave it some additional responsibilities. Further, recognizing that environmental protection and improvement was an integral part of sustainable development, it required UNEP to foster the integration of environmental considerations in all sectors of development. To be effective in the evolving framework of environment and development policy and co-operation, UNEP's work had to promote sustainable development, even as it provided information, guidance and assistance on environmental assessment, policy and management, and built consensus on and advanced environmental policy and action.

3. UNEP recognized this inherent challenge in implementing Agenda 21 and sought to address it pro-actively and deliberately. Through an open process of reflection, consultation and discussion, it defined its mission, recast its Programme structure, focus and content, revised the modalities of its work with an emphasis on devolution, partnerships, decentralization, cultivation of new constituencies, while strengthening ties with the old ones, paid greater attention responding to countries' and people's needs, and fostered openness, empowerment and accountability in management. Not only that UNEP's work had to be scientifically and technically sound, but it also had to be developed and delivered to facilitate its partners' action for the environment and for sustainable development. Moreover, actors and programmes in the environmental field multiplied after UNCED, and UNEP's work had to remain cutting-edge, even as it strengthened environmental institutional capacities at national, regional and global levels.

4. What follows is a synoptic report on UNEP's implementation of UNCED follow-up, encompassing Agenda 21 and its Annexes: Rio Declaration and Forest Principles. UNEP's catalytic, stimulating and overseeing role in the environmental field enjoins upon it the responsibility to enhance environmental sensitivity in all spheres of human activity. While focusing on the areas that require its primary attention, UNEP has played its expected role in practically all parts of Agenda 21, within the limits of its resources and mandate. The report is organized following the structure of UNEP's streamlined Environment Programme after UNCED, aimed at integrating environmental work in action for sustainable development. Organizing the text in Programme clusters helps minimize overlap in reporting.

5. The report is presented under five main parts: A. Sustainable Management and Use of Natural Resources; B. Sustainable Production; C. A Better Environment for Human Health and Well-being; D. Globalization and the Environment; and E. Global and Regional Servicing and Support. Each part is divided into sections, with indications of their correspondence to relevant Agenda 21 chapters and annexes. Chapters which are relevant to most areas,

such as those on cross-sectoral issues, are not repeated under references for section headings. For those Agenda 21 chapters for which UNEP is the designated Task Manager, it has submitted separate reports to the CSD. The present report seeks to capture their essence for UNEP's role in implementation. These areas are: Atmosphere; Biological Diversity; Desertification and Drought; Hazardous Wastes; Toxic Chemicals; and Information for Decision-making.

II. Overview of Progress

A. Sustainable Management and Use of Natural Resources

A.1 Freshwater Coastal and Marine Resources

References: Chapter 17: Protection of Oceans, Seas, Coastal Areas and Marine Living Resources; Chapter 18: Protection of Freshwater and Application of Integrated Approaches to Water Resources: Rio Declaration: Principles 7, 10, 19.

A.1.1 Approach

6. UNEP consolidated its formerly distinct freshwater and oceans/coastal programmes into an integrated water programme, facilitating water-related issues to be addressed as a management continuum. The main issues UNEP addresses in this area include: threats to the marine and coastal environments, especially from land-based activities; water resources and water demand in the context of increasing scarcity; deteriorating water quality; capacity building in regard to awareness, skills, institutions, policies and legislation; bridging the information and data gaps in water resource assessment; transboundary water management; strategic role of water in relation to poverty, health and food security; health of aquatic environments; and threats to marine and coastal resources.

A.1.2 Achievements

a. Protection of Marine Environment from Land-based Activities

7. Governments adopted the Global Programme of Action to Protect the Marine Environment from Land-based Activities (GPA) at an intergovernmental conference organized by UNEP in Washington (1995). GPA represents the commitment of more than 100 governments, and the European Community, to protect the marine environment from adverse environmental impacts of land-based activities. It calls upon UNEP and its partners to support and strengthen existing regional structures/programmes, such as UNEP's Regional Seas programmes, and provide the secretariat to GPA to promote its implementation. UNEP facilitated and supported the preparatory process including organizations of a number of regional workshops, for the GPA to build consensus on various issues, encompassing implementation mechanisms, arrangements and modalities. UNEP is encouraging and facilitating activities to enable national countries and regional bodies to develop and implement action programmes within the framework of GPA.

b. Regional Seas Programmes

8. UNEP administers 13 Regional Seas programmes in which over 140 coastal States and territories take part. In line with Agenda 21 guidance it catalyzed a review of several Regional Seas programmes to introduce in them an integrated approach to addressing water issues and the objectives of global and regional environmental agreements, including the GPA. The Mediterranean Action Plan and the Barcelona Convention, including its Protocols, on land-based sources of marine pollution, were revised and brought in line with recent developments. A similar process is underway in the Regional Seas programmes for Eastern Africa, East Asia, West and Central Africa, Wider Caribbean, and the Northwest Atlantic.

c. Environmentally-Sound Management of Inland Waters (EMINWA)

9. UNEP continued to facilitate intergovernmental agreements for environmentally sustainable management and use of transboundary water resources (lakes, rivers, groundwaters). Among the activities completed include diagnostic studies for the Mekong and San Juan River Basins, the Lake Titicaca and Lake Chad Basins, the Aral Sea, and activities in the Lake Erhai River Basin. Initial activities to address a legal instrument for sustainable management of the Caspian Sea water resources are underway. Activities were also initiated in support of development of Action Plans for the environmentally-sustainable management of the Lake Titicaca and San Juan River Basins. They are being reinforced by contributions by UNEP's International Environment Technology Centre (IETC) in regard to identifying and assessing alternatives for augmenting freshwater resources in situations of water scarcity. Efforts are underway to identify, assess and integrate the land-freshwater-coastal linkages critical for implementation of the GPA. These efforts particularly focus on identification and control of land-based activities causing degradation of the coastal and marine environment.

d. Implementation of GEF's International Waters Programme

10. As an implementing agency of GEF, UNEP assists countries to develop and implement projects focusing on control of pollution of international waters. In this role, UNEP works closely with UNDP, World Bank, GEF Secretariat and concerned Governments to help develop and implement an integrated approach to river/lake basin and coastal management, consistent with the principles outlined in Agenda 21, and GEF's operational strategy for international waters. UNEP's role in GEF international waters activities, inter alia, complements its role in assisting countries to prepare transboundary diagnostic analyses, and regional and global reviews of threats to freshwater, coastal and marine environments. Recent GEF-supported initiatives of UNEP include: (i) development of a Strategic Action Programme for the Bermejo River Basin in Latin America; (ii) a global international waters assessment; (iii) planned regional assessments of land-based activities in relation to controlling pollution of international waters; and (iv) activities to support the development of a Strategic Action Programme for several transboundary water systems, including the San Juan, San Francisco and Upper Paraguay River Basins, the lake Titicaca Basin, and the Red Sea and Gulf of Aden Basins.

e. Special Regional and Global Initiatives

11. UNEP chairs the Interagency Water Working Group of the UN System-wide Special Initiative on Africa and promotes a "Fair Share" approach within the programme. It also supports, for example through expert workshops, the implementation of the International Coral Reef Initiative (ICRI) and related conventions and agreements, including on seagrass and mangrove ecosystems. Further, it supports activities to help countries implement the Barbados Action plan on Small Island Developing States (SID).

f. Assessing System-wide Progress

12. The United Nations Committee on Natural Resources (CNR) requested UNEP in 1994, in its role as the focal point for global water issues, to determine the status of implementation of Agenda 21, on a regional basis, and report the results to the CNR (May 1996) to enable it to submit its recommendations to ECOSOC and General Assembly. UNEP convened regional expert group meetings in collaboration with its Regional Offices and the Regional Economic Commissions, to discuss the implications of Agenda 21 for integrated management and use of water resources and to assess the progress made, and needed, in implementing Agenda 21's Chapter 18. The review focused on issues and constraints relating to policy, institutional and legal arrangements, remedial measures and development assistance.

A.1.3 Outlook

13. Human health impacts of deteriorating water quality and potential conflicts relating to the threats to the marine environment, water scarcity and distribution, pose serious challenges. To address them it is necessary to enhance regional and sub-regional co-operation and help countries integrate social, economic and environmental considerations in water development, distribution and management. Such initiatives, however, are fraught with political, institutional, methodological and resource constraints. While maintaining the scientific and technical rigour of its work, UNEP has to strengthen partnerships across sectors and disciplines to contribute to achieving major development objectives, e.g: access to safe drinking water and sanitation; food security; sustainable agriculture and rural development; cleaner production and industrial development; pollution control; and improved quality of life. Intergovernmental cooperative arrangements to address water issues also need increased development assistance for their effective implementation.

A.2 Land Resources, including Forests and Mountains

References: Chapter 10: Integrated Approach to the Planning and Management of Land Resources; Chapter 11: Combating Deforestation; Forest Principles; Chapter 12: Managing Fragile Ecosystems: Combating Desertification and Drought; Chapter 13: Managing Fragile Ecosystems: Sustainable Mountain Development; Chapter 14: Promoting Sustainable Agriculture and Rural Development; Chapter 32: Strengthening the Role of Farmers; Chapter 35: Science for Sustainable Development; Chapter 5: Demographic Dynamics; Rio Declaration: Principles 3, 5, 10.

A.2.1 Approach

14. UNEP's Land programme has four main facets: catalyzing an integrated approach to the planning and management of land resources; strengthening partnerships with other United Nations bodies (e.g. UNDP/UNSO, WB, FAO, UNESCO, WMO, Regional Commissions) to implement Chapter 12 programme areas, with particular attention to the negotiating process and implementation of the Convention to Combat Desertification (CCD); developing and promoting UNCED's Mountain agenda, in partnership with agencies within and outside the UN system; and providing environmental guidance in action to combat deforestation.

15. To foster an integrated approach to the planning and management of land resources, UNEP promotes and supports research on land resource systems and practices for their sustainable development and management; develops indicators of quality and sustainability of land resources, taking into account environmental, economic, social, demographic and other factors; promotes transfer of techniques and technologies; and promotes training.

16. UNEP's strategy in desertification control has been to: promote actions in support of the CCD, including helping develop national, subregional and regional action programmes for its implementation; improve policy-relevant assessments of dryland degradation; increase global awareness of dryland management and desertification control issues; promote people-oriented approaches to sustainable land use and natural resources management; and assist in preparing projects for submission for GEF financing in land degradation as it relates to the GEF focal areas. In implementing this strategy, UNEP promotes policy frameworks that allow the integration of development and environmental goals for sustainable livelihood systems and rural well-being; promotes measures which protect lands that are not degraded, or only slightly degraded, by sustaining their productivity as a first priority in combating desertification; and applies corrective and rehabilitation measures to degraded lands, as a second priority, within the total anti-desertification programme. UNEP serves as Task Manager for Agenda 21's Chapter 12 and prepared thematic progress reports on desertification and drought for submission to CSD and GA.

17. In support of the mountain and forest agenda, UNEP: participates in the activities of the World Mountain Forum; promotes development of national

action programmes and regional cooperation programmes on sustainable mountain development; enhances awareness of mountain issues; promotes application of UNEP Environmental Guidelines for Integrated Management of Mountain Ecosystems; and initiates and assists in developing projects for GEF funding in mountain ecosystems. It generates and strengthens knowledge of the ecology and sustainable development of mountain ecosystems; promotes integrated watershed development, and alternative livelihood opportunities to reduce pressure on fragile land. UNEP provides guidance on environmental issues in implementing Forest Principles and assesses their implications for sustainable forest management practices.

A.2.2 **Achievements**

a. Planning and Management of Land Resources

18. UNEP and FAO jointly prepared a guidelines document to help strengthen national capabilities to formulate policy and action for integrated planning and sustainable management of land resources, while linking drylands management to global climate initiatives. To assist in technology transfer, and to facilitate the interpretations of status and trends of land quality, quantity and their sustainable use, several regional and national databases on soils and terrain information were established. UNEP collaborated with FAO and the World Bank in preparing a handbook on Land Quality Indicators.

b. Combating Desertification and Drought

19. UNEP provided substantial financial and technical support to the CCD negotiations, supporting the Interim Secretariat, the International Panel of Experts, the preparation of background documents and position papers by African experts, the case studies, the regional consultative meetings, and the participation of NGO's and experts at preparatory meetings and negotiating sessions. It also facilitated national and regional consultations to implement the CCD.

20. UNEP convened a workshop with international experts on the "Social Dimensions of Desertification: Listening to the People" and published its proceedings in book form. To synthesize and advance scientific understanding of the processes and magnitude of carbon sequestration in drylands, UNEP convened an expert workshop on Carbon Sequestration in Drylands, and published its proceedings. Jointly with WMO and the INCD Secretariat, it published a volume exploring the linkages of climate and desertification. It also published a book on Halophytes as resources for livestock. It prepared two reports on Migration and Desertification, one incorporating case studies from three continents.

21. As part of an active awareness raising campaign, UNEP prepared numerous public information materials and distributed them directly and through "Earth Action". With the INCD Secretariat it also prepared and widely distributed "Down to Earth" - a simple language guide to the CCD, and a special edition of "Our Planet" devoted to Desertification issues and translated into five languages. It published the Desertification Control Bulletin twice annually and also a World Directory of Arid Land Research Institutions. Several video programmes and programme segments were prepared for UNEP by TVE and broadcast worldwide on BBC, WTN and other channels. UNEP also prepared an NGO Guide for Community-Driven Project Evaluation.

22. UNEP instituted the Saving the Drylands awards were to recognize successful sustainable "best practices" and to disseminate information for possible replication. It provided support to the development of national action programmes in ten countries. UNEP became a co-sponsor of the CGIAR process, and was a key player in the development of the Desert Margins Initiative in Sub-Saharan Africa, of the "People, Land Management and Environmental Change Programme" proposed for GEF funding. It carried out a case study on the role of Women in Desertification control in Pakistan, and a

pioneering National Land Degradation Assessment and Mapping Programme in Kenya, with the support of the Government of the Netherlands.

c. Sustainable Mountain and Forest Ecosystems

23. UNEP participates in the Inter-agency Task Force on Mountains, provides substantive support to intergovernmental and non-governmental consultations at regional and international levels, and published Environmental Guidelines for Integrated Management of Mountain Ecosystems. In cooperation with partners, it developed a new forest assessment methodology, taking into account environmental economics, the Forest Principles, and new methods of surveying and monitoring forests, which also provides for an integrated consideration of the impact of deforestation on loss of biodiversity, land degradation and climate change.

24. UNEP: developed its Forest Policy and Proposed Action Programme for 1996-2000; provided guidance on environmental issues in implementing the Forest Principles, assessed their implications for combating deforestation, and provided expertise on a sustained basis to the CSD's Intergovernmental Panel on Forests (IPF). UNEP and FAO jointly organized regional workshops on: the implications of Agenda 21 and Forest Principles for sustainable forest management (SFM), to consolidate regional perspectives into the Secretary-General's report to CSD, and to develop the criteria and indicators for SFM to help implement the IPF work programme. UNEP collaborated with the World Bank to review policies and practices for sustainable forest management at the Africa Forest Policy Forum. UNEP and CIFOR jointly reviewed forest management practices of the past fifty years in the humid tropical Forest Anglophone West African region.

A.2.3 Outlook

25. Identifying replicable methods to husband resources in mountain ecosystems should receive greater attention, especially taking into account community participation. In land degradation, awareness raising and promoting action at grassroots level to prevent desertification, and to restore degraded areas, need to focus more on the circumstances and livelihoods of the affected people. UNEP will continue its efforts to assist developing countries to formulate options for integrated planning. It will strengthen its partnerships within and outside of the United Nations system to provide information and guidance on: promising approaches to environmental and natural resource management; integrated natural resource information systems; integrated, planning and policy development; and linkage of global environmental objectives with local and national development.

A.3 Biological Diversity

References: Chapter 15: Conservation of Biological Diversity; Chapter 16: Environmentally Sound Management of Biotechnology; Chapter 35: Science for Sustainable Development; Chapter 38: Institutions, Paragraph 22 (h): Coordination functions arising from Conventions; Rio Declaration: Principles 3, 7, 15, 19; Forest Principles.

A.3.1 Approach

26. UNEP supports implementation of the Convention on Biological Diversity (CBD) and builds consensus on critical issues such as biosafety. It provides technical and scientific backstopping to the CBD Secretariat's work and to joint programmes with United Nations agencies, IGOs and NGOs, in support of the CBD and related Conventions. Its activities include: linkages between and coordination of biodiversity-related Conventions; integrating biodiversity in sectoral planning; equitable sharing of biodiversity benefits; community-based conservation; and trade-related issues. In building consensus on biosafety-related issues, UNEP promotes implementation of biosafety guidelines, and the development of biosafety international agreements. By preparing and widely disseminating the Global Biodiversity Assessment, UNEP has sought to provide a basis for prioritization, planning and programming for biodiversity conservation and sustainable use. As the

Task Manager for Chapter 15 of Agenda 21, UNEP, in collaboration with DPCSD and United Nations agencies, prepared the progress reports on its implementation for submission to CSD 3 and the CSD's Special Session in 1997.

A.3.2 **Achievements**

a. Biodiversity

27. UNEP promoted the ratification and early entry into force of the CBD and provides technical and administrative support to it. In support of CBD it: published guidance documents such as the "Biodiversity Programme and Implementation Strategy" and "Forest Policy"; assisted in developing national biodiversity studies, strategies and action plans; published the "Global Biodiversity Assessment"; collaborated in biodiversity data management and development of information exchange networks; developed programmes for ex situ and in situ conservation of species diversity and their ecosystems, and helped integrate aspects of biodiversity economics and legal issues in programme and project development.

28. UNEP addresses biodiversity conservation and sustainable use at various levels: ecosystems/biogeographic realms (forests, arid zones, oceans, freshwater); species (wildlife); genetic resources (plant, animal and microbial resources, and natural resource economics); processes (biotechnology); monitoring and assessment; and legislative. In collaboration with United Nations agencies it: provides technical and scientific backstopping; organizes expert meetings; prepares reports to respond to specific issues; provides secretariat support to biodiversity-related Conventions and assists in developing or strengthening national legislation to implement them; prepares regular global biodiversity status reports as a basis for priority action; assists Governments in preparing biodiversity country studies, strategies and action plans; and, through CITES, assists Governments in determining the status of endangered species, preparing management plans and establishing export quotas for species transferred from the Convention's appendix I to appendix II.

29. UNEP promotes conservation of plant, animal and microbial genetic resources and their use in agriculture, forestry and industry; develops related global and regional gene banks and information systems; provides guidance on conserving and managing habitats, ecosystems and wildlife in selected biogeographic representative areas; strengthens and expands the global network of gene banks housing the world's base collections of crop genetic resources (coordinated by IPGRI), the global programme on livestock genetic resources (coordinated by FAO), the LAC and African biodiversity networks, the Biodiversity Information Network (BIN21), the microbiological resources centres (MIRCENS), the international Microbial Strain Data Network (MSDN), the World Data Center on Micro-organisms (WDC), and the global Information Resource on the Release of Organisms into the Environment (IRRO); and strengthens related professional and institutional capabilities for the assessment and sustainable management of biodiversity, through pilot projects and training programmes.

30. UNEP, jointly with IUCN and WRI, prepared the Global Biodiversity Strategy to stimulate and implement local, national and international action. It launched the Global Marine Biological Diversity Strategy jointly with the Centre for Marine Conservation, IUCN and WWF. It initiated the Global Biodiversity Assessment (GBA), with GEF support, to provide an independent, critical, peer-reviewed scientific analysis of the current issues, theories and views regarding the main global aspects of biodiversity. The GBA serves as a basis for decision-making to meet the objectives of CBD and Agenda 21; it is also a resource for the CBD's scientific body, SBSTTA. Also with GEF support, UNEP launched a project to assist developing countries, and countries with economies in transition, to build their information capabilities and to transfer appropriate technologies and skills in biodiversity information management.

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31. UNEP convened (1996) an expert workshop on Linkages between CBD and FCCC to determine: the role of biological systems in greenhouse gas fluxes (as sources and sinks); research priorities that would help efficiently achieve objectives of CBD and FCCC; and "jointly implemented activities" (JIA), within the context of FCCC, which would simultaneously conserve biodiversity and reduce greenhouse gas emissions. The results of the workshop will help inter alia, contribute to enhancing programmatic synergy between the activities aimed at promoting the implementation of FCCC and CBD.

b. Biosafety

32. UNEP prepared, through a consensus-building process, International Technical Guidelines for Safety in Biotechnology which were adopted (1995) by Government-designated experts, and are being implemented in several countries. They were recommended for use by the CBD's COP-2 and COP-3, SBSTTA-2 and the open-ended Ad hoc Working Group on Biosafety. UNEP initiatives, undertaken in collaboration with the CBD Secretariat, governmental, intergovernmental and non-governmental organizations, and the private sector, include: preparing the UNEP International Technical Guidelines for Safety in Biotechnology, produced in all UN languages; convening regional workshops, co-sponsored with Governments and the international scientific bodies, to deliberate on implementing the Guidelines and developing the required capacity building; preparing an International Register on Biosafety (IRB) to facilitate information exchange on a range of issues, including: information on biosafety guidelines; developing regulations and notification schemes; providing guidance on releases; commercialization; coordinating advisory services related to living modified organisms; opening dialogue with industry concerning its possible role in and contribution to implementing the Biosafety guidelines; supporting the joint UNEP/UNIDO/ICGEB (International Centre for Genetic Engineering and Biotechnology) training on safety in biotechnology development and application; convening an international workshop to promote implementation of the UNEP International Technical Guidelines for Safety in Biotechnology; and providing inputs to prepare the CSD Task Manager's (UNIDO) report on Environmentally Sound Management of Biotechnology, and assisting in reviewing and finalizing it.

A.3.3 Outlook

33. UNEP will intensify exchange of experience and information on sustainable use of biodiversity in different biogeographic and socio-economic contexts, and develop guidance on equitable sharing of the benefits from genetic resources to help integrate biodiversity considerations in development policies and plans. Development and adoption of a Protocol on Biosafety to the CBD will foster environmentally sound biotechnology applications in agriculture and industry. UNEP needs to continue to promote the engagement of the private sector in implementing the CBD and its future protocol(s). Avenues of promoting biodiversity conservation through sub-regional and regional cooperation have to be explored fully.

A.4 Atmosphere

References: Chapter 9: Protection of the Atmosphere; Chapter 31: Scientific and Technological Community; Chapter 35: Science for Sustainable Development; Chapter 38: Institutions, paragraph 22 (h): Coordination of Conventions; Rio Declaration: Principle 7.

A.4.1 Approach

34. UNEP supports, as a partner, the World Climate Programme and its "Climate Agenda" which provides an integrated framework for international climate-related programmes and identifies the areas for international work during the next decade: exploring new frontiers in climate science and prediction; developing climate services for sustainable development; making available studies of climate impact assessments and response strategies to reduce vulnerability; and providing dedicated observations of the climate

system. UNEP is called upon to implement climate impact assessments and response strategy studies. It also facilitates the implementation of UN Framework Convention on Climate Change (FCCC), inter alia, through information exchange, and assists countries in developing and implementing GEF-financed projects to achieve FCCC's objectives.

A.4.2 **Achievements**

a. Sources and Sinks of Greenhouse Gases

35. The IPCC, which was established by UNEP in partnership with WMO, prepared assessment reports that informed the intergovernmental negotiations on the FCCC, and continues to inform the COP of the FCCC. UNEP developed guidelines on inventorying sources and sinks of greenhouse gases which have been endorsed by the COP. It helps develop internationally agreed guidelines on climate impact assessment and mitigation strategies, and methodological frameworks for the costing of greenhouse gases abatement. UNEP's work on EI Nino Southern Oscillation (ENSO)-related impacts is leading to applications of El Nino information in policies and planning, as reflected in the series of Usable Science workshops it has convened.

36. UNEP initiated a GEF-financed activity aimed at expanding methodological guidance on climate change mitigation; based in part on the work of IPCC and various country study support programmes, it will compile and test common guidelines for climate change mitigation. UNEP prepared a catalogue of original emission factors, as part of national climate change studies which identifies current gaps in knowledge and can be used as a basis to develop projects to improve application of available guidelines on climate change mitigation. As part of the country studies on impacts of climate change, UNEP prepared, in cooperation with IPCC, a handbook on methods for climate change impacts and adaptations assessment, to complement the IPCC Technical Guidelines for Climate Change Impacts and Adaptations Assessment.

b. Greenhouse Gases Abatement Costing

37. The UNEP Collaborating Centre on Energy and Environment (UCCEE) developed a methodological framework and coordinated country studies in ten developing and industrialized countries, on greenhouse gas abatement costing. A report on the project was published in three volumes. UNEP organized an international conference in Copenhagen on national actions to mitigate global climate change, to discuss the aims of the FCCC and how they could be translated into practical action. Detailed studies of application of the Greenhouse gas abatement costing methodology were made in Venezuela and Zimbabwe, in collaboration with country teams, which were supported, respectively, by the Energy Systems Group at RISO, Denmark, and Lawrence Berkeley Laboratory, USA.

38. UCCEE initiated a Southern Africa Development Conference (SADC) regional mitigation analysis activity, in collaboration with institutions in Botswana, Tanzania, Zambia, and Zimbabwe, to: develop and test a methodological framework for sub-regional mitigation analysis and strengthen regional approaches and responses to address climate change; establish national frameworks for mitigation strategies and enhance national capacities to implement the FCCC.

39. UNEP held (1996) an Open Forum on New Partnerships to Reduce Greenhouse Gases with broad-based participation of governments, private sector and NGOs to discuss the technical and political issues related to Activities Implemented Jointly and Joint Implementation (AIJ/JI) under the FCCC. The Forum discussed issues of: methodology, to comprehensively measure not reductions in absorption of GHG emissions from AIJ/JI; Steps required to encourage the private sector in AIJ/JI; capacities needed in developing countries to negotiate and participate in AIJ projects; and allocation of responsibility for emissions reduction for both global economic efficiency

and international equity. The aim of the Forum was to provide guidance for and encourage appropriate development of AIJ/JI activities under FCCC.

c. ENSO-related Impacts Assessments

40. UNEP held (1994) the first Usable Science meeting which considered drought and its early warning in Africa, and a second meeting addressed ENSO-related problems in North America. UNEP, together with the Environmental and Societal Impacts Group of the National Centre for Atmospheric Research (ESIG/NCAR), held four regional meetings on Usable Science, two in Ho Chi Minh City, Vietnam, (1995) and two in Havana, Cuba, (1996). Building on available research, the meetings sought to determine if impacts of ENSO events might be anticipated with sufficient reliability. Such assessments should facilitate socio-economic decision-making to mitigate adverse impacts of climate change, or enable countries to achieve maximum benefit from benign weather events.

d. Climate Impacts and Response Strategies Networks (CIRSNet)

41. The CIRSNet/Africa was established and is operational with 21 government-designated national focal points and an Advisory Group consisting of UNEP, UNDP, UN/FCCC Secretariat, UNITAR, WMO, ACMAD and ENDA. Since November 1995 UNEP compiles the information received on progress in implementing climate-related activities in a quarterly newsletter and disseminates it to the CIRSNet/Africa members.

e. Policy Responses to Climate Change and Sea Level Rise

42. After completing an assessment of socio-economic impacts and policy responses related to Climate Change, UNEP convened a regional workshop in Southeast Asia to review national reports from the three participating countries (Indonesia, Malaysia and Thailand) on the assessment. The national reports and their collective review in the workshop helped provide an insight into the likely nature and magnitude of the impacts especially on economic activity of climate change and into the adaptations measures required to reduce vulnerability to climate change. The workshop's conclusions and recommendations were widely disseminated.

f. Global Climate Observing System (GCOS)

43. UNEP collaborated with WMO, UNESCO and International Council of Scientific Unions (ICSU) in catalyzing the establishment of GCOS which seeks to provide the data sets to ensure an improved forecasting of the climate system. It participates in GCOS activities related to the Global Terrestrial Observing System (GTOS) and Global Ocean Observing System (GOOS). Under the direction of its Joint Scientific and Technical Committee (JSTC), the GCOS has produced an operational plan. UNEP collaborated through the JSTC in the setting up of the Terrestrial Observation Panel, in cooperation with the GTOS.

g. Information Unit for Conventions (IUC)

44. UNEP transformed (1996) the Information Unit on Climate Change (IUCC) it had established earlier into the Information Unit for Conventions (IUC), thus broadening its scope. IUC acts as a service and support unit to the FCCC and also to the CBD, the CCD secretariats, and the Montreal Protocol. This support includes: producing public information materials, such as fact sheets and booklets; disseminating information via mailings, conferences and other organizations; organizing campaigns to encourage support from business and other special interests; formulating media strategies, issuing press releases, and managing press relations for conferences; maintaining a World-Wide Web site (http://www.unep.ch); providing information technology and communications services; developing training and seminar support tools, such as overheads and slides; and building and maintaining databases of mailing addresses and key contacts.

A.4.3 **Outlook**

45. UNEP will continue to identify and promote the means through which countries could reduce their vulnerability to climate variability and to natural and anthropogenic climate change. Priority areas include: identification of vulnerable areas and regions; methodologies for vulnerability assessment; adaptation to reduce vulnerability; mitigation response options; and public awareness and communication. Information on successful policy responses to reduce greenhouse gas emissions and to enhance carbon sinks has to be widely disseminated and technical and other cooperation among countries to implement the FCCC has to grow. UNEP will support the implementation of FCCC through the development, assessment and promotion of response measures, and by removing ambiguity and disagreements over the impacts and sensitivities to climate change.

A.5 **Ozone Layer**

References: Chapter 9: Protection of the Atmosphere; Chapter 35: Science for Sustainable Development; Chapter 34: Transfer of Technology; Chapter 37: Capacity Building; Chapter 39: International Legal Instruments; Rio Declaration: Principle 7.

A.5.1 **Approach**

46. The Vienna Convention and the Montreal Protocol were negotiated and agreed under UNEP auspices. UNEP provides multiple services in this area, such as: Multilateral Fund Secretariat; Ozone Secretariat, with the responsibilities of political promotion of Protocol, data reporting, servicing of meetings of Parties, and operating UNEP/TEAP/TOC Committees; Implementing Agency (OzonAction programme) with the functions of: information exchange, including promotion of technology transfer; training workshops; networking of ODS officers; assisting in developing Country Programmes; institutional strengthening; and being treasurer of Multilateral Fund. In partnership with UNDP, UNIDO and World Bank, UNEP provides assistance and guidance to countries in implementing the Convention and the Protocol, provides information and training and helps develop Country Programmes, with particular attention to the large number of countries which individually consume low-volumes of ODS. UNEP also helps build capacities in the developing countries, in collaboration with its partners. With GEF support, it also assists CITs in implementing the Montreal Protocol. UNEP serves as a clearinghouse of information on the phasing out of ODS and publishes the newsletter "OzonAction".

A.5.2 **Achievements**

47. The Vienna Convention and the Montreal Protocol registered significant progress in implementation. Industrialized countries phased out the production and consumption of halons by 1 January 1994, and chlorofluorocarbons (CFCs) by the end of 1995. The consumption of CFCs in industrialized countries decreased to 13,000 tons in 1996, from about a million tons in 1987, when the Protocol was adopted. The rates of ODS atmospheric build-up have decreased in recent years, as a result of implementing the Protocol. While industrialized countries are well on their way to phase-out ODS in accordance with the Protocol, and are taking further steps to lower stratospheric bromine through tightening control measures on methyl bromide, the ozone layer will not recover unless developing countries also adopt control measures for Hydrochlorofluorocarbons (HCFCs) and methyl bromide. The Multilateral Fund established in 1993 (first as an interim Fund in 1991) assists developing countries in phasing out the controlled substances. During 1994-1996 it disbursed about $ 500 million to assist developing countries implement the Montreal Protocol. Parties have agreed (November 1996) to replenish the Fund for $540 million for 1997-99.

A.5.3 **Outlook**

48. Monitoring and enforcement of compliance by the Parties with the Protocol's provisions as well as their accurate data reporting, will receive

increasing emphasis. It is generally accepted that the concentration of the ozone layer in the stratosphere has stabilized, with scientists forecasting full rehabilitation of the ozone layer by the middle of the next century. Research on monitoring the ozone layer needs to be supported to stimulate and backstop collective action. Emphasis will increase on developing the means to transfer new technologies to developing countries to enable them to phase out ODS.

B. Sustainable Production

B.1 Cleaner Production

References: Chapter 19: Environmentally Sound Management of Toxic Chemicals; Chapter 20: Environmentally Sound Management of Hazardous Wastes; Chapter 30: Strengthening the Role of Business and Industry; Chapter 34: Transfer of Environmentally Sound Technology, Cooperation and Capacity Building; Chapter 38: paragraph 22 (j): facilitation of information exchange on environmentally sound technologies and provision of training; 38.22 (m): support to governments in response to requests; 38.22 (n): further developing assessments and assistance in cases of environmental emergencies; Chapter 3: Consumption Patterns; Rio Declaration: Principles 8, 9, 11, 15.

B.1.1 Approach

49. UNEP works with business and industry, governments, NGO and IGOs to catalyze action and encourage constructive cooperation to promote sustainable production, with a focus on industry. UNEP's strategy in this field involves: networking and collaborating with governments, industry and environmental groups and with other international organizations, particularly, UNIDO, UNDP, ILO, WHO, IMO and World Bank; exchanging information on environmentally sound technologies and management tools among industry, governments, international organizations and development banks; addressing environmental issues in business and industry in an integrated and systematic way, taking into account processes and products, pollution and resources, technologies and management tools; raising awareness of decisionmakers in industry, government, local authorities and training/educational institutions; promoting selected demonstration activities (success stories that can catalyze action by others); and regularly reviewing progress in consultation with outside experts. UNEP's programme seeks to: foster a preventive rather than end-of-pipe approach; focus on those industries that have significant environmental impacts, or which are major energy consumers; and focus on activities where strategic alliances can achieve maximum catalytic impact.

B.1.2 Achievements

a. Information Dissemination, Networking and Publications

50. The Industry and Environment Quarterly Review marked its 20th year in 1995, and continues to provide a forum for exchange of information research, application and practice in sustainable industrial development. The Review has a readership of over 50,000 in 170 countries. The demand for UNEP's individualized Industry and Environment Query-Response Service has expanded, from 5,000 requests in 1992 to over 10,000 in 1995, for documentation and technical information. To support its Query-Response Service, UNEP continues the development of a database on bibliographic information on countries' environmental standards and guidelines on industrial discharges. A computer-based system, the International Cleaner Production Information Clearing-house (ICPIC), was set up in cooperation with the USEPA to provide information on cleaner technologies. An information exchange network was also established to ensure the transfer of information on scientific, technical and policy options for the phase-out of controlled ozone-depleting substances.

51. UNEP publishes the following twice-yearly newsletters in English, French, Spanish and Chinese: Cleaner Production; APELL; and EnTA. Since 1992 it also published and widely disseminated over 60 manuals, handbooks, training guides and workbooks, case study and policy reviews, survey reports,

technical guides and information on standards and compliance, encompassing various manufacturing industries, as well as mining, transport and tourism.

b. Capacity Building

52. Jointly with UNIDO, UNEP established eight National Cleaner Production Centres (NCPCs) with the purpose of promoting the preventive approach through Cleaner Production. Other centres established by countries themselves, or with bilateral support, are part of the UNEP-facilitated network for exchange of information and experiences among NCPCs. UNEP and UNIDO continue to promote the establishment of new national Cleaner Production centres. UNEP has also conducted training workshops in industrial pollution management.

c. Technology Assessment

53. UNEP launched in 1993 its Environmental Technology Assessment Programme as a complement to its Cleaner Production Programme. It encourages the use of technology assessment as a tool to support the development and application of environmentally sound technologies. UNEP activities to foster information exchange on transfer of environmentally sound industrial technologies include publications on environmental technology assessment, and the IE/IETC/INFOTERRA publication on information sources on environmentally sustainable technology.

d. Demonstration and Promotion

54. UNEP collaborated with the World Bank and Government of China in demonstrating cleaner industrial production as a viable policy in China. The results of this collaboration are published in "Cleaner Production in China: A Story of Successful Cooperation".

e. Awareness and Preparedness for Industrial Emergencies

55. Agenda 21 endorsed UNEP's Awareness and Preparedness for Emergencies at Local Level (APELL) programme. Under APELL, UNEP has convened local workshops, national seminars as well as regional events in Asia and the Pacific and Latin America, to encourage the development of emergency response procedures at the local level.

f. Environmental Reporting and Training in Industry

56. UNEP convened (1994), with representatives from industrial, financial, non-governmental and international organizations, a Roundtable on Environmental Reporting which reviewed a report on Company Environmental Reporting which profiled 100 corporate reporting pioneers and set out 50 key building blocks for company environmental reports. Sponsoring companies and key stakeholders took part in an Engaging Stakeholders meeting (1996) to review UNEP's recent two-volume publication on Engaging Stakeholders, and to develop a work programme on corporate environmental reporting to the year 2005. UNEP, in partnership with the International Chamber of Commerce (ICC), held high-level meetings (1994 and 1996) with environment ministers, CEOs of major companies, and NGOs to discuss cooperation in implementation of the ICC Business Charter for Sustainable Development and in promoting sustainable production and consumption. It published an Environmental Management Systems Training Resource Kit (1995), jointly with the International Chamber of Commerce (ICC) and the Federation International des Ingenieurs - Conseils (FIDIC). Training activities using the Kit have been undertaken in five countries. The Kit is currently being translated into many national languages.

g. Consultations and Participatory Reviews

57. UNEP convenes an annual consultation since 1984 with industry and trade associations. Since 1992 it reviews progress made by the business community in implementing Agenda 21, and to exchange experience and information. Over

40 international and national industry associations meet every June to discuss sustainable production and consumption issues and emerging trends in environmental management. On a biennial basis the Cleaner Production and APELL programmes convene international experts to review progress and develop future work programmes.

B.1.3 **Outlook**

58. UNEP's Cleaner Production programme fosters a preventive approach to industrial pollution control and encourages sound technologies, using both software (environmental management systems) and hardware (equipment). The role of markets in promoting technology cooperation for Cleaner Production has to be supported by the right policies, incentive systems, information, training, capacity building and technical cooperation. UNEP, and its partners in industry and the UN system, are playing a supportive role to stimulate and reinforce government and industry action for Cleaner Production in the developing countries and in countries with economies in transition. The programme's emphasis on production processes will increasingly shift to products and services, and encompass both demand and supply factors involved in industrial environmental management.

B.2 **Hazardous Wastes**

References: Chapter 20: Environmentally Sound Management of Hazardous Wastes, including Prevention of Illegal International Traffic in Toxic and Dangerous Products; Chapter 19: Environmentally Sound Management of Toxic Chemicals; Chapter 39: International Legal Instruments; Rio Declaration: Principles 2, 13, 14, 19.

B.2.1 **Approach**

59. UNEP, in collaboration with the secretariat for the Basel Convention (SBC) and UNIDO, provides a forum of discussion, coordination and assessment of progress in hazardous waste management, makes available relevant information, guidance and training, and facilitates intergovernmental negotiation and implementation of instruments bearing on hazardous waste management and their transboundary movement. UNEP's Cleaner Production programme provides guidance, assistance and training in minimizing the generation of hazardous wastes.

B.2.2 **Achievements**

a. <u>Prevention and Minimization</u>

60. Activities under UNEP's Cleaner Production programme, including demonstration projects, studies, establishment of national centres, training, information dissemination on technologies, guidance materials, review reports and workshops, contribute to prevention and minimization of hazardous wastes. These are reported under Cleaner Production.

b. <u>Strengthening Institutional Capacities for Management</u>

61. One hundred countries and the European Community are Parties to the Basel Convention. SBC published guidelines for environmentally sound management of wastes subject to the Convention (organic solvents, used oils, PCBs, household wastes), and guidelines for their disposal (landfill, incineration, oil re-refining); updated model legislation on hazardous waste management, and compiled national provisions and guidance documents on managing hazardous wastes and their transboundary movement for recovery. A Regional Centre for Eastern Europe for training and technology transfer for management of hazardous wastes and their minimization was established in Slovakia. SBC, with UNEP support, provides assistance to countries in addressing specific problems, makes available technical guidelines and training materials, and convenes awareness building seminars relating to the management of hazardous wastes.

c. International Cooperation

62. The third meeting of the COP of the Basel Convention decided to amend the Convention in regard to prohibition, by each Party member of OECD, EC and Leichtenstein, of all transboundary movements of hazardous wastes destined for final disposal to other States. It also decided to phase out by 31 December 1997, and prohibit from that date, all transboundary movements of hazardous wastes for recovery, recycling, reclamation, direct use or alternative use from Party members of OECD, EC and Leichtenstein to other States. The Bamako Convention came into force on 20 March 1996. Other regional Protocols concerning the transboundary movements of hazardous wastes entered into force (Pacific), or are being developed. Work is under way on preparing a Protocol on liability and compensation for damages resulting from transboundary movements or disposal of hazardous wastes.

B.2.3 **Outlook**

63. The spread of Cleaner Production technologies and practices, enhanced awareness of "eco-efficiency" in production, and establishment of national Cleaner Production centres will help in reducing production of hazardous wastes. Adoption of national legislation to implement the Basel Convention and improved access to information and guidelines on proper management of hazardous wastes will reduce associated risks to human health. Efforts need to intensify in regard to training, technical cooperation, technology transfer, information dissemination and introduction of policies to influence both the supply and demand sides of hazardous wastes management. The modalities to minimize production of hazardous wastes from sources other than industry (e.g. hospitals, agriculture) need to receive greater attention. Improvement of occupational safety and health conditions for workers involved in managing hazardous wastes also needs priority attention.

C. A Better Environment for Human Health and Well-being

C.1 Toxic Chemicals

References: Chapter 6: Protection and Promotion of Human Health; Chapter 19: Toxic Chemicals; Chapter 14: Promoting Sustainable Agriculture and Rural Development; Chapter 34: Transfer of Environmentally Sound Technology, Cooperation and Capacity Building; Chapter 35: Science and Sustainable Development; Chapter 39: International Legal Instruments; Rio Declaration: Principle 19.

C.1.1 **Approach**

64. UNEP is an active player in Chapter 19's co-ordinated implementation which has entailed creation of two bodies: the Inter-Organization Programme for the Sound Management of Chemicals (IOMC), consisting of UNEP, WHO, ILO, UNIDO, FAO, OECD, and UNITAR; and the Intergovernmental Forum on Chemicals Safety (IFCS), an intergovernmental body that invites the full participation of governments, intergovernmental organizations, and NGOs in its deliberations. Within this framework UNEP implements many activities, including those relating to assessment, information dissemination, training and capacity building, in partnership with others, to promote sound chemicals management, and help coordinate overall work as Task Manager for Toxic Chemicals. It produced for CSD and UNGA the Task Manager's report on implementation of Agenda 21's Chapter 19.

C.1.2 **Achievements**

a. Prior Informed Consent (PIC): Programme and Instrument

65. In line with Governments' directive, UNEP, in cooperation with FAO, convened intergovernmental negotiations for a legally binding instrument on Prior Informed Consent (PIC). Negotiations are well underway toward a PIC Convention. The first session of the INC for an International Legally Binding Instrument for the Application of PIC Procedure for Certain Hazardous Chemicals and Pesticides in International Trade was held in March 1996, and

the second session in September 1996. After one or two additional negotiating sessions, a diplomatic conference is planned for late 1997. While the negotiations are underway, UNEP and FAO have continued to maintain the voluntary PIC programme. The number of countries participating in this programme has increased to 148, with 17 chemicals subject to procedure. UNEP convened (1996) a meeting of a government-designated group of experts to determine whether further measures were needed to address the risk of a limited number of hazardous chemicals. It developed recommendations on measures needed to address: unwanted stocks of pesticides and other chemicals; capacity building; information access; and criteria to determine whether further chemicals may be appropriate for bans or phase-outs. UNEP also sought the views of governments concerning a possible chemicals "Framework Convention" and produced a summary report on this matter. It also produced a report summarizing the costs and benefits of various information exchange instruments.

b. Persistent Organic Pollutants (POPs)

66. In the UNEP-convened Intergovernmental Conference to Adopt the Global Programme of Action for the Protection of Marine Environment from Land-based Activities (GPA) (1995), Governments agreed to act to develop a global, legally binding instrument for the reduction and/or elimination of emissions, discharges and, where appropriate, elimination of the manufacture and use, of POPs. The Executive Body of the Convention on Long-Range Transboundary Air Pollution (LRTAP), under UNECE, gave the Working Group on strategies the mandate to initiate negotiations for a Protocol on POPs. UNEP invited IOMC, working with IPCS and IFCS, to initiate an assessment process on POPs, starting with a list of twelve substances. It also invited IFCS to develop, building on past and ongoing work, and the results of the assessment process, recommendations and information needed for a possible decision regarding appropriate international action on POPs, for consideration by UNEP Governing Council and World Health Assembly. On behalf of IOMC, UNEP convened an Ad Hoc Working Group to complete the assessment process. This Working Group was later adopted by IFCS, and has recommended to Governing Council, and the World Health Assembly, that UNEP convene an Intergovernmental Negotiating Committee to develop a legally binding instrument for the initial list of 12 POPs, and that an expert group be established to develop criteria for the possible addition of further POPs, as well as other recommendations for improving the basis for action for the POPs. In assisting governments in this process, UNEP (1996): prepared studies to determine the quantities of POPs which are produced, traded and released to the environment; established an information clearinghouse and open file on POPs; produced assessment reports and strategic plans to address emissions of POPs, as well as reports and information on their use, trade, release and alternatives; and convened expert working group meetings on POPs.

c. Provision of Information, Data and Guidance

67. UNEP published technical and information reports, guides, information datasets and newsletters to enhance awareness of the environmental and health implications of chemicals use and their sound management. These included: Toolbook of Chemicals Management Instruments; IRPTC Legal File covering Regulations and Guidelines on Pesticides; Guide to Chemicals Information on the Internet; Screening Information Data Sets (with OECD); IRPTC Bulletin; Chemicals Bulletin; and Report on Global Use of Lead in Gasoline.

68. UNEP also established meta-databases as effective tools to assist countries in locating information on chemicals, including: Inventory of Information Sources in Intergovernmental Organizations; Inventory of Critical Reviews on Chemicals; and Inventory of National Information Sources on Chemicals (with OECD). Further UNEP established chemical information clearinghouse on Internet, including: UNEP Chemicals Home Page; Prior Informed Consent (PIC) Home Page; Persistent Organic Pollutants (POPs) Home Page; Pollutant Release and Transfer Register (PRTR) Home Page; and Heavy Metals Home Page.

69. UNEP promoted further development of global networking on chemical safety, a major component of this activity being the Global Information Network on Chemicals (GINC). It also produced a complete update of the IRPTC PC Databank, version-2 and delivered it to national institutions dealing with chemicals management. The data files contain over 100,000 health and safety records on over 9,000 chemicals. Functioning within the IOMC framework it led the coordination of activities on information exchange and reported on them to IFCS at ISG-2.

d. Training and Capacity Building

70. Within the IOMC framework UNEP, jointly with FAO and UNITAR, conducted training on operation of the PIC procedure in all regions. It provided training and capacity building services to developing countries and to countries with economies in transition in the sound management of chemicals. UNEP responds on a continuous basis to governmental and other queries on toxic chemicals through UNEP's Chemicals Query-Response Service. It promotes the global advancement of Pollutant Release and Transfer Registers (PRTRs) by: operating a clearinghouse of technical information; providing support to governments on emissions estimation; advising governments on the management of emissions data and its release to the public; and raising awareness and promoting PRTRs, in collaboration with OECD, UNITAR, and other IOMC organizations. It sponsored an international workshop on endocrine disruption which is an emerging issue on the global chemicals agenda.

C.1.3 **Outlook**

71. Establishment of the IOMC and IFCS has helped advance co-ordinated implementation of Agenda 21's Chapter 19. Toxic chemicals are gaining recognition as a global environmental concern, but resources have not kept pace with the demand for information, assistance, assessment, and action for safe management. In the case of PIC, UNEP and FAO have been able to make progress towards concluding a PIC instrument, three years in advance of the schedule called for in Agenda 21. In the case of POPs a new initiative -- which was not envisaged by UNCED -- UNEP and IFCS have demonstrated creative flexibility in advancing an important chemical safety issue to the political level. Action has progressed through open and transparent processes, with full involvement of governments, intergovernmental organizations, and NGOs. Facilitating access to relevant information on chemicals at various levels, and building capacities for chemicals management deserve priority attention. International legal instruments and assistance in technology cooperation have to reinforce government policies and private sector action for sound chemicals management.

C.2 **Health and the Environment**

References: Chapter 6: Protection and Promotion of Human Health; Chapter 19: Environmentally Sound Management of Toxic Chemicals; Chapter 20: Environmentally Sound Management of Hazardous Wastes; Chapter 21: Environmentally Sound Management of Solid Wastes and Sewage; Chapter 14: Promoting Sustainable Agriculture and Rural Development; Rio Declaration: Principles 4, 5, 10, 11.

C.2.1 **Approach**

72. UNEP assesses and analyzes the links between human health and environmental conditions, and clarifies relationships between levels of exposure to environmental contaminants/hazards and human health. It participates substantively in the ongoing work programmes of WHO, ILO and other development institutions in this field, and disseminates information to encourage mutually supportive policies and planning relating to health and the environment.

C.2.2 **Achievements**

a. Health and Environment Analysis for Decision-making

73. The HEADLAMP project was initiated (1993) jointly by UNEP, WHO and USEPA. It aims to make available to decision-makers, health professionals and local communities useful information on local and national health impacts of environmental hazards. It uses methodologies in environmental epidemiology, human exposure assessment and other health and environmental sciences to collect and analyze data, and produces information that can be understood easily and used as a basis for action. Field studies carried out in nine cities in developing countries under the project focused on developing and testing environmental health indicators and their links to local decision-making.

b. Pest and Vector Management

74. Over thirty years after Rachel Carson's book "Silent Spring", UNEP and ICIPE prepared a review of the successes and limitations of recent regimes of chemical management of pests, including Integrated Pest Management (IPM). In addition, the UNEP/ICIPE publication "Integrated Pest Management in the Tropics: Current Status and Future Prospects" assessed the current status, and prospects for IPM in Africa, Asia and South America. UNEP, FAO, UNDP and the World Bank have recently established an international IPM Facility to support field interventions, capacity building and training to promote IPM.

75. Through the joint Panel of Experts on Environmental Management for Vector Control (PEEM), WHO, FAO, UNEP and UNCHS collaborate in: prevention and control of water-borne and associated diseases in agricultural development activities; rural water supply and sanitation; wastewater use in agriculture, agro-forestry and aquaculture; and health aspects of water resource development in the urban environment.

c. Promotion of Health-supportive Environments and Capacity Building

76. As a follow-up to the Sundsvall Conference on Supportive Environments, UNEP, jointly with WHO and other partners, organized inter-country meetings in Bahrain, Bangkok and Nairobi to promote environmental health capacity building. A booklet on supportive environments for health promotion is being finalized. Jointly with WHO, FAO, IARC and others, UNEP organized training activities in: prevention and control of food contamination by mycotoxins; environmental epidemiology; cancer prevention and control; environmental health management tools for decision-makers; new approaches to the teaching of environmental health at university level; environmental health impact assessments; and water supply and sanitation for health officers in refugee camps. National fora to initiate planning for capacity building in environmental health management were established in Cuba, Mexico and South Africa, at the initiative of WHO and UNEP. UNEP, jointly with WHO and the Karolinska Institute, surveyed school and university curricula in environmental health, and drafted a basic textbook in environmental health which has been field-tested in summer schools in Visby and Bucharest.

d. Risk Assessment

77. UNEP, jointly with the International Commission for Protection against Environmental Mutagens and Carcinogens (ICPEMC), reviewed the current status of available methods for genetic risk assessment. The joint UNEP/ICPEMC publication, "Methods for Genetic Risk Assessment", provides a state-of-art review of the available methods to detect the genetic toxicity of environmental agents to human and non-human biota. Several international collaborative studies to validate currently available short-term tests to detect environmental genotoxins were initiated under the WHO/UNEP/ILO International Programme on Chemical Safety (IPCS). Their results were published in special issues the journal "Mutation Research". UNEP, jointly with other UN agencies and scientific organizations, also conducted training

workshops to promote the use of internationally validated short-term tests for the detection of environmental genotoxins.

e. Human Health in Urban Settlements

78. The 1996-97 UNEP/UNDP/WB/WRI World Resources report reviews the status of human health in urban areas and suggests measures for its improvement. UNEP compiled an International Sourcebook on Environmentally Sound Technologies for Municipal Solid Waste Management. It will be published by end-1996, and widely distributed. Jointly with WHO, UNEP reviewed epidemiological literature on air pollution and its health effects in China, bringing together relevant published data to improve the understanding of health effects of air pollution.

f. Solar Radiation

79. The International Project on Health, solar UV and environmental change (INTERSUN) is a collaborative effort of UNEP, WHO and ICNIRP whose objectives are to promote collaboration in implementing the activities and research to evaluate the quantitative relationship between solar UV at the earth's surface and human health, and to develop reliable predictions of the health consequences arising from changes in UV levels. It also aims to provide national authorities advice on programmes to prevent excessive UV exposure and thereby reduce health care costs.

g. Climate Change and Human Health

80. UNEP, WHO and WMO published (1996) an expert scientific assessment of the potential impact of climate change on human health. A draft proposal for an Interagency Network on Climate and Human Health is being considered by UNEP, WHO, WMO and FAO, in close cooperation with IGBP and IHDP.

C.2.3 **Outlook**

81. By providing internationally validated scientific assessments of the effects of environmental change and degradation on human health, UNEP and its partners enhance awareness of the facts and issues in governments, academia and the public. Connecting science with policy, UNEP helps fill the gaps in information and promotes sound policies and action. Health, like environment, is an inter-sectoral field which is effectively addressed by means of an integrated approach, with an emphasis on damage prevention. UNEP will further continue to enhance inter-sectoral cooperation to improve health and environmental conditions simultaneously.

C.3 **Human Settlements and Environment**

References: Chapter 7: Promoting Sustainable Human Settlements and Development; Chapter 21: Environmentally Sound Management of Solid Wastes and Sewage Related Issues; Chapter 34: Transfer of Environmentally Sound Technology, Cooperation and Capacity Building; Rio Declaration: Principles 4, 5, 9.

C.3.1 **Approach**

82. The priority areas established by the joint Bureaux of the UNEP Governing Council and the Commission on Human Settlements for UNEP/UNCHS cooperation include: promoting sustainable human settlements in an urbanizing world; and improving human settlements planning. UNEP's contribution to implementing chapters 7, 21 and 34 of Agenda 21 is mainly by way of providing technical and programmatic support to relevant UNCHS-habitat activities and promoting exchange of information on sound technologies.

C.3.2 **Achievements**

a. Assessment of Environmental Conditions in Human Settlements

83. UNEP/UNCHS collaboration has helped develop application of geographic information systems in urban environmental management. UNEP/WHO GEMS/AIR, has helped apply air quality assessment techniques to urban management. The joint WRI/UNEP/UNDP/World Bank World Resources: 1996-1997 report focused on assessment of environmental conditions in the urban environment. The joint UNCHS/UNEP Sustainable Cities Programme (SCP) carried out environmental assessments in Shenyang and Wuhan (China), Lusaka (Zambia) Maputo and Nampula (Mozambique) and Madras (India).

b. Environmental Aspects of Policies, Planning and Management of Human Settlements

84. UNEP and UNCHS (Habitat) made SCP a partnership undertaking. Cooperation has covered the areas of: environmentally sustainable technologies, water and coastal zone management; environmental health, geographic information systems (GIS); and the management of industrial risks. In the latter area, training workshops and consultative services have been provided by UNEP's Awareness and Preparedness for Emergencies at Local Level (APELL) programme. UNEP supported the UNCHS publication "Making Cities Work" which maps out the role and functions of local authorities in sustainable urban development, provides a policy blueprint for partnership between local authorities and United Nations in implementing the Habitat Agenda, and contains illustrative best practices in municipal management.

85. UNEP collaborated with the UNCHS (Habitat) in preparing for the Second United Nations Conference on Human Settlements (Habitat II) held in Istanbul in June 1996. A UNEP/UNCHS joint meeting on "Implementing the Urban Environment Agenda" was held during Habitat II. Over 250 representatives of more than 75 cities and 20 international support programmes working in the urban environment convened to define a common agenda for urban environmental planning and management and related international support. UNCHS, with the support of UNEP and others, organized (1996) a conference on "Managing Water Resources for Large Cities and Towns" in Beijing. Its main objectives were: to exchange information, ideas and experience on successful practices in freshwater and wastewater management in large cities and other urban settlements; to synthesize viewpoints and commitments for action from Agenda 21 and Habitat II Agenda, to be adopted in Istanbul; and to prepare the framework for a Roundtable on water resources management in cities and towns.

86. UNEP and UNCHS established a joint Task Force on the Continuum from Relief to Development in October 1993 to coordinate their response to emergencies. They have initiated activities in Iraq, Tanzania and Rwanda, advising governments on environmental aspects of human settlements policy. In response to the problems facing the Great Lakes Region of Africa (Burundi, Rwanda, Zaire, Uganda and Tanzania), a Strategic Action Plan for the Great Lakes Region was published in mid-1996.

c. Environmentally Sound and Appropriate Human Settlements Technology

87. UNEP's International Technology Centre (IETC) was inaugurated (1992) in Japan. IETC serves as a facilitator for the transfer of environmentally sound technology (EST) focusing on solutions for urban problems and management of freshwater lake reservoir basins. It maintains a database on information sources for environmentally sound technologies; publishes a quarterly newsletter "IETC's INSIGHT" and other awareness materials on EST; and compiles case studies on EST needs, modalities and barriers to their transfer; and designs and field-tests training programmes on utilization of environmental technology assessment for decision-making on EST and its transfer.

88. IETC assisted UNCHS in developing local Agenda 21 documents for selected cities. It provided technical assistance to the SCP in advisory services on urban environmental planning and management and supporting capacity-building activities, particularly in regard to: transfer of environmentally sound technologies; environmental risk assessment; environmental technology assessment; and preparation of environmental profiles for urban environmental planning and management. It is collaborating with UNCHS in four sustainable cities projects: Shenyang and Wuhan in China, Katowice in Poland, and Conception in Chile. It implemented a regional workshop (1996) for Eastern Europe on environmental risk assessment in urban settlements development. IETC sponsored and organized, together with the Global Environment Centre (GEC) Foundation of Japan, a symposium and exhibition on environmentally sound technologies (ESTs) during Habitat II. The symposium highlighted examples of both "hard" ESTs in regard to solid waste management and wastewater treatment, and "soft" ESTs on capacity-building, planning and management.

d. Research, Training and Information Dissemination

89. UNEP provided data and technical support to UNCHS during the Habitat II process. Digital maps and posters created with UNEP-GRID assistance were exhibited at the Conference. Joint UNEP/UNCHS products for capacity building in SCP include tools for: remote-sensing and GIS technology; air quality management; environmental risk assessment; management of environmental health risks; addressing gender issues in SCP; and conducting city consultations. They also include: a CD-ROM and world-wide-web site; technical publications; video documentaries; Sustainable City News, a quarterly newsletter; and an information service to provide routine responses to queries.

C.3.3 **Outlook**

90. The joint UNCHS/UNEP SCP has the potential to serve as a capacity building mechanism to promote environmental planning and management of urban development. Urban development planning and management need to be seen in the larger context of area and rural development planning and management, with a view to minimizing environmental damage and achieving sustainable improvements in the quality of life.

D. Globalization and the Environment

D.1 Environmental Law and Institutions

Development of International and National Legal Instruments, Mechanisms and Institutional Arrangements

References: Chapter 8: Integrating Environment and Development in Decision-making; Chapter 37: National Mechanisms and International Cooperation for Capacity-Building; Chapter 38: International Institutional Arrangements: paragraphs 22 (b): promote international cooperation and recommend policies; 22 (h): international environmental law; 22 (l): technical, legal and institutional advice; Chapter 39: International Legal Instruments and Mechanisms; Rio Declaration: Principles 2, 11, 12, 13, 14, 19, 24, 26, 27.

D.1 **Approach**

91. UNEP provides technical and institutional support in developing and implementing international environmental agreements. It also provides technical assistance and advice to developing countries and countries with economies in transition to strengthen their national environmental legislation and institutions, facilitates information exchange in environmental law, and provides a forum for the coordination of relevant activities of secretariats of international environmental agreements.

D.1.2 **Achievements**

a. Capacity Building in Environmental Legislation and Institutions

92. UNEP assessed needs in respect of environmental legislation and institutions in 23 countries; reviewed legal and institutional frameworks for environmental management in 16 countries; helped formulate framework environmental laws or sector-specific environmental legislation in 30 countries; and reviewed the implementation of multilateral environmental agreements in Latin America and the Caribbean, in the Intergovernmental Authority for Development (IGAD) member countries, and in four developing countries in Asia and Africa.

93. UNEP also organized and participated in national consensus-building fora on legal and institutional reforms for environmental management in eight countries, national and regional seminars on environmental policy, law and administration in South Asia, Africa and the South Pacific, and two global seminars for developing countries and countries with economies in transition. It provided comments on Government legislative proposals and general legal advice, upon request, to six countries and two regional intergovernmental bodies.

94. It provided training to legal officers from eleven countries through their formal attachment to the secretariat; disseminated reference publications including: an Arabic compendium of international environmental agreements; a register of international treaties and agreements; a directory of principal governmental bodies dealing with the environment; bi-annual bulletins on environmental law; and the first volume of an environmental law training series.

95. UNEP strengthened collaboration with agencies within and outside the UN system in the design and delivery of technical assistance activities. For example, UNEP and UNDP implemented a joint project on the development of environmental law in Africa since 1993, whose Steering Committee includes, besides UNEP and UNDP, the World Bank, FAO, IUCN and WHO. UNEP and SPREP are collaborating in providing assistance in environmental law to the South Pacific Island States.

b. International Environmental Law

i) Montevideo Programme

96. The Programme for the Development and Periodic Review of Environmental Law for the 1990's (Montevideo Programme II) is the second long-term UNEP plan of action in the field of environmental law, based on a consultation and review process. The programme includes promoting the adoption of new and implementation of existing environmental law, and assisting States in national capacity building in environmental legislation and institutions.

ii) Support to and Coordination of Convention Secretariats

97. UNEP provides administrative, technical and financial support to the secretariats of international environmental agreements concluded under its auspices to promote their implementation. These agreements include: the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES); The Convention on the Conservation of Migratory Species of Wild Animals (CMS); The Basel Convention on the Transboundary Movement of Hazardous Wastes and Their Disposal; The Vienna Convention for the Protection of the Ozone Layer, and the Montreal Protocol on Substances that Deplete the Ozone Layer (Montreal Protocol); and The Convention on Biological Diversity (CBD). It also provides the secretariat for some Regional Seas Conventions. Finally, it serves as interim secretariat for the Lusaka Agreement on Co-operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora (Lusaka Agreement). UNEP provides administrative and institutional coordination to strengthen collaboration among Convention Secretariats

convenes regular meetings of the UNEP-administered Convention Secretariats to discuss issues of common concern.

iii) Implementation and Further Development of Instruments

98. UNEP organized (1995-96) three expert workshops on International Environmental Law Aiming at Sustainable Development. These resulted in a draft paper on International Environmental Law Aiming at Sustainable Development, and a preliminary draft study on the feasibility and need for new international environmental instruments, in the context of the review of the Montevideo Programme.

· CITES

99. CITES is administered by a secretariat provided by UNEP and financed through contributions from its Parties. It: prepared criteria for amendments to the CITES Appendices and its distribution to Parties and NGOs for comments; reviewed resolutions of the Conference of the Parties with the aim of making them more consistent and easier to implement; continued implementation of projects and prepared a proposal to generate funding in support of CITES objectives; monitored and reviewed implementation of the primary or secondary recommendations on trade in 100 species; and fielded technical assistance missions to help end consumer trade in selected endangered species.

· Lusaka Agreement

100. The Lusaka Agreement was adopted under UNEP auspices in September 1994 and has been signed by seven Eastern and Southern African countries and ratified/acceded to by four States. It complements the implementation of CITES and CBD at the regional level and will enter into force on 10 December 1996. Within three months after its entry into force, UNEP, which provides interim arrangements to support implementation of the Agreement, will convene the first Governing Council meeting of its Parties.

· The Convention on the Conservation of Migratory Species of Wild Animals (CMS)

101. The CMS Secretariat developed Memoranda of Understanding and Agreements including: Agreement on the Conservation of Bats; Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas; Memorandum of Understanding aimed at ensuring the survival of the Siberian White Crane; Agreement on the Conservation of African-Eurasian Migratory Waterbirds; Memorandum of understanding for the endangered Slender-billed Curlew, and Agreement on the Conservation of Small Cetaceans of the Mediterranean and the Black Sea. About 25 proposals are pending for the preparation of Agreements for the conservation of endangered migratory species or groups of species. They include: migratory waterbird species in the Asia/Pacific region, and antelopes in arid zones, such as the Sahelo-Saharan region and Central Asia.

· Code of Ethics on International Trade in Chemicals

102. In cooperation with industry and NGOs, UNEP published, in line with Chapter 19 of Agenda 21, "The Code of Ethics on International Trade in Chemicals" to guide the private sector in enhancing safety in international trade in chemicals. The Code takes into account the entire life cycle of chemical production, transport, use and disposal, and aims at reducing risks to health and the environment. The International Conference on Chemical Safety (1994) and the second session of the CSD (1994) recommended wide application of the Code.

103. Progress of implementation of CBD, Basel Convention, Vienna Convention and Montreal Protocol and on developing instruments for PIC and POPs is reported separately in this report under appropriate sections.

c. Environmental Damage Resulting from Military Activities

104. The UN Compensation Commission (UNCC) hears claims of environmental damage and depletion of natural resources caused by military activities. In 1994 UNEP embarked upon a study with the aim of contributing to the work of the UN Compensation Commission and other relevant UN bodies, and to further developing the law in this area. Its report was made available to the UNCC in July 1996, covering issues of reasonableness of compensation for environmental damage, and appropriate methods for assessing and valuing such damage including depletion of natural resources.

105. Pursuant to a request of its Governing Council and CSD's recommendation, UNEP initiated regional meetings to discuss the application of environmental norms by military establishments. UNEP in cooperation with the ECE convened a meeting (1995), for countries in the ECE region and two meetings (1996) for South-east Asia and South Asian countries, in cooperation with ESCAP. At these meetings Governments discussed environmental problems caused by military activities, military establishments' compliance with national environmental norms, and the contribution of the military to the achievement of national environmental goals.

D.1.3 **Outlook**

106. The number and coverage of environmental agreements have been growing, along with national environmental legislations and regulations. The institutional, policy and resource demands for their compliance and enforcement have become considerable. The developing countries and countries with economies in transition need information, guidance and assistance to improve compliance and enforcement of environmental law. There is a need to identify and make widely known effective practices. The processes of developing new international instruments need to be more effectively related to the establishment of the means of their implementation. New international instruments currently under development or consideration include: further CMS Agreements; a protocol on biosafety under the CBD; a protocol on protection of the marine environment from land-based sources of pollution under the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region; a global legally binding instrument on PIC in trade in certain hazardous chemicals; and a global legally binding instrument on Persistent Organic Pollutants (POPs).

D.2 **Economics and Trade**

References: Chapter 2: International Cooperation to Accelerate Sustainable Development in Developing Countries and Related Domestic Policies; Chapter 8: Integrating Environment and Development in Decision-Making; Chapter 38: paragraph 22 (c) develop natural resource accounting and environmental economics; 38.22 (i) development and promotion of widest possible use of environmental impact assessments; Rio Declaration: Principles 12, 16, 17.

D.2.1 **Approach**

107. In Economics and Environment UNEP seeks to synthesize and disseminate guidance and information and promote capacity-building in methodologies and instruments in respect of: valuation of environmental and natural resources; natural resource accounting; economic instruments; and environmental impact assessment. In regard to Trade and Environment, it aims to clarify the relationship between trade and environment policies, including trade implications of international environmental agreements, and facilitate coordination of environmental and trade regimes, by providing information, analysis, case studies and training.

D.2.2 **Achievements**

a. Valuation of Environmental Goods and Services

108. UNEP convened an expert group meeting on valuation of environmental and natural resources to review methodologies for valuation of environmental and

natural resources, and identify gaps with particular attention to the needs of developing countries and CITs. It helped prepare a state of the art review on applying valuation techniques to environmental problems in developing countries. UNEP published a book on economics of environmental degradation and sponsored a workshop on application of valuation methodologies to oceans and coastal areas to consider policy implications of valuation of environmental and natural resources. It is compiling case studies from developing countries and CITs as reference and training material and to provide a basis for an operational manual on the subject. This should help promote application of valuation techniques in environmental impact assessments, cost-benefit analysis, risk assessment, natural resource accounting, and for internalization of environmental costs in prices of goods and services.

b. Environmental and Natural Resource Accounting (ERA)

109. UNEP, in cooperation with UNDESIPA/STAT and UNECE, sponsored a workshop (1994) in the Slovak Republic on environmental and natural resource accounting, with particular reference to CITs. In view of the ongoing transition to conventional national accounts in these countries, it focused on implementing the revised system of national accounts together with the development of environmental satellite accounts and provided recommendations on the conceptual and methodological advances and modalities of ERA in CITs.

110. UNEP and UNDESIPA/STAT initiated (1994) a project on application of techniques of integrated environmental and economic accounting in three countries aiming to provide them with an adjusted indicator for their real sustained growth, and to highlight the need to reflect degradation and depletion of natural resources in national income accounts. The case studies will generate guidance on the application of ERA and help clarify its implications for development plans. A project has also been initiated with UNECE on application of environmental accounting in Hungary. UNEP established (1995) an international working group to prepare a user-friendly manual on ERA which will stress the benefits to be gained from greening the national accounts, specifically in the service of economic policy objectives.

c. Economic Instruments

111. UNEP convened a consultative expert group meeting (1994) to review the use and application of economic instruments for environmental management and sustainable development, with special reference to application in developing countries and CITs. Following its recommendation, UNEP in collaboration with UNCTAD, convened an expert group meeting to consider: the economic, environmental, social, legal and institutional implications of internalization of environmental costs; principles for a practical approach to internalization policies; border effects and impacts on competitiveness in national and international markets; and linkages between internalization, sectoral and environmental policies. It made recommendations for further research, guidelines, principles and on the economic, legal, financial and institutional arrangements needed to facilitate implementation of internalization policies. A book is being published on the use of economic instruments for environmental management. A joint UNCTAD/UNEP project on environmental cost internalization in the commodity sector was undertaken and a workshop on the application of economic instruments with special focus on freshwater was convened (1995).

112. UNEP and FAO initiated a joint project on training of trainers for countries of the Near East and Mediterranean focusing on the use of economic policy instruments and tools for sustainable agriculture and rural development planning. UNEP, with ECLAC and the OECD, launched (1993) case studies on "The application of Economic Instruments for Environmental Management" to survey the context in which economic instruments were being used in advancing environmental policy in selected countries. UNEP is currently compiling and synthesizing case studies on the uses of economic

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instruments in different countries to be used as reference and training material.

d. Environmental Impact Assessment

113. UNEP promote effective EIA implementation as a tool for decision-making to strengthen national EIA capacities, EIA follow-up, including monitoring and assessment, by providing practical methodological guidance. UNEP's EIA programme development benefitted from an Expert Group Meeting convened (1993) in collaboration with OECD (DAC). UNEP held, in collaboration with the Commonwealth Secretariat and EarthCare Africa, a sub-regional workshop for EIA practitioners for Central and Eastern African Countries (1994) in Zambia which provided guidance to prepare an EIA framework for Africa. In collaboration with the World Bank, UNEP organized (1995) a workshop on the Environmental Impacts of Structural Adjustment Programmes (SAPs) which made recommendations for further activities in this area. UNEP convened a series of workshops on EIA in West Asia, Asia and the Pacific, and Latin America (1994/95). It published two resource documents: "EIA: A Training Resource Manual", to enable trainers to develop training courses and programmes tailored to different target groups, and, "EIA: Issues, Trends and Practice", an overview to enable practitioners to develop EIA guidelines to meet their countries' needs.

e. Trade and Environment

114. UNEP supported, with UNCTAD, case studies in developing countries to assess links between trade and the environment, including issues related to biodiversity, freshwater management, land degradation and the border effects of market-based instruments. It launched an Environment and Trade Monograph series, providing trade and environment policy makers information and analysis on various aspects of the trade and environment relationship. The 15th monograph in the Series is currently being prepared for publication. It supported the UNCTAD Trade and Environment training programme, Train for Trade. It organized a workshop on Environment and Trade in Nepal and regional training workshops in environment and trade in South Pacific, Central and Eastern Europe, Western Asia, Latin America and the Caribbean and Africa. UNEP and UNCTAD jointly sponsored a series of ministerial and round-table meetings and capacity-building workshops to promote better understanding of the implications of globalization for the environment and trade, and of the relationship between multilateral environmental agreements and trade policies.

D.2.3 **Outlook**

115. Awareness has increased of the significance of environmental impact assessment, valuation of the environment and of natural resources and the use of economic instruments, as effective tools for environmental management. Development organizations are increasingly involved in providing guidance and assistance to countries on the use of EIA, valuation methods, resource accounting and economic instruments for better environmental management. UNEP's partnership with these and other bodies has to facilitate countries' access to information and experience on adoption of user-friendly and cost effective methods and instruments. In trade and environment UNEP's partnership with WTO, UNCTAD and OECD has to help promote mutual support between trade and environmental policies to further sustainable development.

D.3 Awareness Building, Participation and Education

D.3.1 Non-Governmental Organizations, Women, Children and Youth

References: Chapter 23: Preamble: Major Groups; Chapter 24: Global Action of Women Towards Sustainable Development; Chapter 25: Children and Youth in Sustainable Development; Chapter 26: Recognizing and Strengthening the Role of Indigenous Communities and People; Chapter 27: Strengthening the role of Non-Governmental Organizations; Rio Declaration: Principles 10, 20, 21, 22, 25, 27.

D.3.1 **Approach**

116. UNEP made broad-based participation of major groups in environmental action a priority. Each programme area has its own main constituency(ies); in addition UNEP has strengthened partnerships with environmental NGOs, local authorities, parliamentary forums, consumer groups, religious communities, women, children and youth bodies, and indigenous people. It also formed National Committees in many countries encompassing a cross-section of interest groups to raise public awareness of environmental issues and to organize environment-related events. Its Environmental Citizenship initiative seeks to integrate and broaden the reach of its awareness building and education programmes, to enhance informed involvement of concerned interest groups in environmental action. Development of action strategies, manuals and kits and information networking are some of the means used to strengthen partnerships with major groups.

D.3.1 **Achievements**

a. Women

117. UNEP established a focal point and an issues board to advise the Executive Director on gender issues. It held an international seminar on Gender and Environment which called for shared responsibility between women and men in working towards sustainable development. The seminar's statement "Gender and the Environment: A UNEP Perspective" was the main UNEP contribution to the Fourth World Conference on Women. UNEP also sponsored 15 women participants in the Beijing Conference and disseminated: a publication on Global 500 Women Laureates, highlighting the success stories of 100 women recognized as being environmental action trendsetters; a poster illustrating the theme Women and the Environment; and five thematic videos, co-sponsored with the Television Trust for the Environment (TVE).

b. Children and Youth

118. UNEP's Children and Youth programme seeks to inculcate among young people a concern for and involvement in environmental protection. Its emphasis has been on extra-curricular activities in the school system and in neighbourhood-based group action. Its partners include the scouts' organization, the Red Cross and Red Crescent, the Global Youth Forum and the International Children's Conference. UNEP appointed twelve regional Youth Advisers to assist formulating and implementing regional strategies and work programmes. They have helped to expand UNEP's work to over 1500 groups worldwide, and to promote youth involvement in special events such as World Environment Day and Clean Up the World Campaign.

119. UNEP convenes Global Youth Forums regularly to consider youth involvement to improve the environment. It held the International Children's Conference on the Environment, in Eastbourne, U.K., and the Youth Communication and Network (YOUTH CaN) Conference at the United Nations Headquarters to explore ways of using communications technology and networking to care for the environment.

c. Indigenous People

120. Consultations between UNEP and indigenous people of the Americas have focused on their close links to land and natural resources and their contribution to environmental management. Efforts are under way in the Biodiversity programme to utilize indigenous knowledge in conserving species and restoring ecosystems.

d. Non-Governmental Organizations

121. UNEP's Policy Towards NGOs and other Major Groups was developed in consultation with the NGO community, stressing the need to secure NGO input in Programme development. Ongoing partnerships with the Environment Liaison

Centre International (ELCI), EarthAction Network, African Centre for Technology Studies and others have helped bring NGO perspectives and expertise to bear on programme development and information exchange. Partnership with the United Nations Non-Governmental Liaison Service (NGLS) has served as a clearing house and source of system-wide information.

e. Local Authorities

122. The International Council for Local Environmental Initiatives (ICLEI) has been the environmental arm of the International Union of Local Authorities (IULA). ICLEI has been active in climate issues and in developing best-practice criteria for cities. It collaborated with UNEP in preparing "The Planning Guide for Local Authorities on Implementation of Agenda 21".

f. Ethics

123. UNEP and the North America Environmental Sabbath Planning Committee convened (1994) leading environmental philosophers, theologians, ecologists and scientists to address, from their own perspectives, the ethical issues involved in implementing Agenda 21. The result was published as "Ethics and Agenda 21". Ethics and the Environment is a major component of UNEP's Environmental Citizenship initiative.

g. Sports

124. UNEP's partnership with the International Olympic Committee (IOC) aims to transmit environmental values through the medium of sports. Its main objectives are to ensure that: the city hosting the Olympics will respect and protect the environment; a positive environmental message will emerge from the event; actions are carried out in accordance with national environmental legislation and guidelines; organizers go beyond meeting minimum environmental requirements, and promote the host city's involvement in environmental improvement.

h. World Wide Web (WWW)

125. Internet users increasingly expect UNEP to provide information on various issues on the WWW, and Governments, industry, NGOs now have Internet access to information on UNEP's environment-related activities. WWW/UNEP also offers general and administrative information as well as access to reports, documents, handbooks, guides, project documents, Annual Reports, and publications such as, "Our Planet" and "Taking Action".

D.3.1 **Outlook**

126. NGOs and various interest groups have increasingly become major allies in the movement for environmental protection and improvement. The challenge before UNEP is how best to connect with this vital energy to keep abreast of local and national environmental action and issues, and to promote maximum networking and synergy for responsive programme delivery.

D.3.2 **Public Awareness and Education**

Chapter 36: Promoting Education, Public Awareness and Training; Chapter 38 paragraph; 22 (g): raising general awareness and action; Chapter 4: Changing Consumption Patterns; Rio Declaration: Principles 3, 4, 6, 10, 25.

D.3.2 **Approach**

127. Through regular events and awards, special campaigns, networking with journalists, promotion through audio-visual media, development of curricula and environmental education at non-formal, primary, secondary and tertiary levels, UNEP seeks to enhance public awareness and understanding of environmental issues and to influence attitudes, choices and action. Its collaboration with UNESCO of long standing has helped introduce environmental

content in education curricula at various levels, and has promoted both specialized and generic training to foster better environmental management. UNEP's Environmental Citizenship initiative seeks to broaden and enhance the impact of UNEP's work in the fields of environmental awareness building and education.

D.3.2 **Achievements**

a. Special Events

i) World Environment Day

128. The annual organization of World Environment Day (5 June) celebration was held in: Beijing (1993) on the theme "Poverty and the environment: Breaking the vicious circle"; London (1994) on the theme "One Earth, One Family"; Pretoria (1995) on the theme "We the Peoples, United for the Global Environment"; and Istanbul (1996) on the theme "Our Earth, Our Habitat, Our Home".

ii) Clean Up the World Campaign

129. In September 1993 UNEP reached out to more than 30 million people in 79 countries who took part in the first "Clean Up the World Campaign". The global success of this community-level clean-up campaign has led to its observation as an annual event.

iii) International Photo Competition

130. UNEP with Canon Inc. co-sponsored 2 systemwide international photo competitions in 1993 and 1995. The first event had over 32,000 entrants and the last event over 44,000, from 153 countries. The competition focuses on people's perception of the environment through the camera lens. Exhibitions of prize-winning photographs were held in the capital cities of 20 countries. Books are published from each competition featuring outstanding photographs.

iv) Global 500 Awards

131. UNEP honours individuals and organizations that are recognized as having made a valuable contribution to environmental awareness through action. The awards are given annually during the World Environment Day (6 June) celebration to approximately 30 laureates. Since 1993 a special Award category was created for young people.

b. Awareness Building

i) "Our Planet"

132. UNEP's flagship periodical Our Planet is published in four languages, with a circulation of more than 20,000, including special issues, to coincide with major UN conferences, such as: Biodiversity; Small Island States; Population and the Environment; Sustainable Social Development; Women and Sustainable Development; and World Food Summit.

ii) "Taking Action: An Environment Guide"

133. This "how to" publication is aimed at fostering community-level environmental action. Written by NGOs and environmental experts intended for individuals and community service organizations, it is also of interest to those generally concerned with the well-being of the Earth and the human environment.

iii) News Media Inputs and Communication

134. UNEP customarily makes inputs to news media on topical and major environmental issues, findings and developments, as well as on environmental

aspects of development. It also provides news stories and features. UNEP-ROLAC introduced an environmental information supplement, which is published bi-monthly in newspapers in three Latin American countries, to alert readers to environmental issues and to stimulate their involvement in action for environmental protection and improvement.

iv) Environmental Manuals

135. UNEP produced environmental manuals for the Scouts' organization and published a handbook "The Local Agenda 21 Planning Guide" on the development of local environmental action plans. "Rescue Mission Planet Earth: A Children's Edition of Agenda 21" was published by Peace Child International, in association with other United Nations organizations.

v) Joint Publications

136. UNEP seeks to maximize its publications coverage and impact by working in collaboration with partners. For example, it helped fund the magazine "Ecoforum" published by the Environment Liaison Centre International (ELCI). It also worked with the World Wildlife Fund for Nature (WWF) and the World Conservation Union (IUCN) to produce the publication "Caring for the Earth: A Strategy for Sustainable Living". Majority of Programme publications are produced and disseminated jointly with partner agencies.

vi) Films

137. UNEP's principal success in media productions is related to its partnership with the Television Trust for the Environment (TVE) which has backed over 200 documentaries and new and current affairs features. Film productions are done collaboratively with International TV producers and other UN agencies. TVE, following the success of its "Developing Stories" series of six films by film-makers from developing countries, produced a series of six short films for the Beijing conference on women and Sustainable Development.

vii) Exhibits

138. UNEP organizes environmental exhibits for special events, conferences and meetings. For example, in association with the Smithsonian Institution, it organized an exhibition in the Bahamas on the tropical rainforest canopy, to coincide with the First Meeting of the Conference of the Parties to the CBD and it collaborated with the UN system in organizing the UNIC exhibits for Conferences organized under United Nations auspices.

c. Education and training

i) Environmental Management Training

139. In collaboration with UNESCO, ILO, UNIDO, universities, and with support from Governments, UNEP offered during 1992-1995 environmental management training courses to personnel from developing countries and countries with economies in transition. The courses were held at Dresden University of Technology (Germany), Tufts University (Boston, United States), Tampere University of Technology (Finland), and the International Academy of the Environment (Geneva, Switzerland). In 1993 the Tampere, Finland course (which focused on clean technologies) was transferred to the Eastern and Southern Africa Management Institute (ESAMI), Tanzania. UNEP also held environmental management seminars for senior Government officials in Nairobi, with the assistance of UNEP staff.

ii) Pilot Projects

140. UNEP developed pilot projects as a mechanism to test environmental education techniques including: an agricultural and nutritional education programme with an environmental perspective in Ecuador; and radio programmes for environmental education in Costa Rica.

iii) Information Dissemination

141. The quarterly "Connect" newsletter is a UNESCO-UNEP joint publication in eight languages which provides a medium for an international exchange of information and ideas among people concerned about environmental education. Its readership comprises about 200,000 professionals. UNEP produced 2-3 times a year "ET Worldwide", a compilation of information on environmental training.

iv) Response to Requests for Assistance

142. UNEP provided on request: technical assistance to institutions for small environmental education projects; guidance, advice and material to individuals and institutions; information on opportunities in environmental training; and direct assistance through country missions on environmental education and training development.

D.3.2 **Outlook**

143. Increasingly individual programme areas have integrated relevant components of training and awareness building into their work programmes. While the UNESCO/UNEP International Environmental Education Programme has helped integrate environmental components into educational curricula at various levels, there is a growing need to relate the enhancement of environmental awareness to participation and action in environmental improvement. Keeping in view the trends towards democratization, decentralization and community level participation, UNEP's Environmental Citizenship initiative is aimed at developing the tools and the institutional structures to achieve broad-based and informed participation of communities and interest groups in caring for the environment.

E. Global and Regional Servicing and Support

E.1 Environmental Information and Assessment

References: Chapter 40: Information for Decision-making; Chapter 38: paragraph 22 (d); environmental monitoring and assessment; (f) dissemination of information to governments; (j) information exchange on environmentally sound technologies; (n) assessment and assistance in environmental emergencies; Chapter 31: Scientific and Technological Community; Chapter 35: Science and Sustainable Development; Rio Declaration: Principles 1, 3, 9, 15, 18.

E.1.1 **Approach**

144. UNEP facilitates improved access to quality environmental data and information, and enhances capacities of governments to use these assets for policy-setting, decision-making and action-planning. It has re-focused its activities to respond better to users' needs and to assist its collaborating institutions to more effectively generate and use information for decision making at national and regional levels. UNEP's programme covers the following areas:

145. Assessment and Reporting: UNEP's environmental assessment and state of the environment reporting activities provide policy-relevant, user-friendly information for informed decisionmaking. This includes: regional and global integrated state-of-the-environment reports; regional and sectoral overviews; early warnings of emerging issues; and identification and evaluation of indicators of sustainable development. UNEP continues to co-ordinate the WHO/UNEP, GEMS/Water and Air monitoring programmes, and contribute to the

ICSU-UNEP-FAO-UNESCO-WMO Global Terrestrial Observation programme and the WB-UNDP-FAO-UNEP Land Quality Indicator programme.

146. Capacity Building and Servicing: UNEP focuses on Environment and Natural Resource Information Networking (ENRIN) in developing countries and in countries with economies in transition. It aims to strengthen the capacity of existing national and sub-regional partner institutions to better manage and more effectively use environmental and natural resources data and information. ENRIN supports the establishment of region-specific knowledge bases, and helps provide an enabling environment for the generation and exchange of relevant information by mobilizing donor support and through technical backstopping.

147. Data and Information: UNEP's environmental data management function is carried out under the Global Resource Information Database (GRID), to provide access to the best possible geo-referenced data and "meta-data" (electronic catalogues and pointers to data), using direct a query-response approach. These objectives are assisted by the information management tools of UNEPnet, including the Internet and the World Wide Web, and, eventually, the proprietary Mercure telecommunications system. GRID also contributes by developing the knowledge base for all sectors of the Programme and for external users, and has expanded its network of cooperating centres in support of its objectives.

148. UN system-wide Coordination, Earthwatch: UNEP's Earthwatch secretariat aims to co-ordinate, harmonize and integrate the efforts of the United Nations system and beyond for environmental observations, assessments and reports, by way of providing a forum and point of contact for inter-agency information exchange.

E.1.2 **Achievements**

a. Assessment and Reporting

149. UNEP initiated a new biennial report series entitled, the "Global Environment Outlook" to provide a global assessment of environmental priorities and concerns, following a regional participatory approach, analyze interactions and linkages, driving forces, impacts and policy responses, and look into the future. The series is produced drawing upon a global network of regional collaborating centres and involves science and policy consultations. United Nations systemwide participation is solicited through the Earthwatch. The first report will be released in early 1997.

150. UNEP produced a State-of-the-Environment Reporting Source Book, in collaboration with Environment Canada and RIVM, bringing together global experience in environmental reporting. GRID-Arendal launched the Norwegian State of the Environment (SoE) Report, the world's first indicator-based, multi-media SoE report on the World Wide Web. ENRIN provided database and assessment reporting assistance for one regional and four sub-regional State of Environment reports in Asia and Pacific.

151. Full partnership was established between WRI, UNEP, UNDP and World Bank to prepare the biennial "World Resources" report series. The 1994-95 report focused on the theme, People and the Environment, with the sub-themes of Women, Population, and Resource Consumption, and the 1996-97 issue focused on The Urban Environment. Apart from analytical reviews and assessments, the series provides valuable statistical data series on environmentally significant variables.

152. GEMS/Air and GEMS/Water strengthened co-operation with partners (WHO, World Bank, WMO, UNCHR, IGBP), and published a variety of sectoral assessments and technical reports, including those relating to: water quality assessment and monitoring; river discharges to the oceans; groundwater quality; GEMS/AIR methodology Review Handbook Series; and UNEP Environment Library Series. The Environment Assessment Technical Report Series

publications included those relating to indicators, precipitation chemistry, national environmental information systems, land cover assessment and monitoring, and Global Terrestrial Observing System (GTOS), among others. Seven issues of the "EarthViews" newsletter were published during 1994-96. In all about 30 reports, newsletters and information bulletins are published during each biennium.

153. UNEP and FAO collaboration resulted in the first approximation of a flexible land use and land cover classification system and improved land use mapping data and presentation. UNEP worked closely with UNDPCSD and UNDESIPA/STAT in developing a coherent set of environmental indicators, including a core set of indicators of sustainable development. It also supported the SCCPE project on indicators of sustainable development. UNEP worked in partnership with the World Bank, FAO and UNDP to develop Land Quality Indicators, and will continue to promote their further development and application. It co-sponsors the Global (Terrestrial, Climate and Oceans) Observing Systems with ICSU, FAO, UNESCO, WMO, and critically reviewed the draft GTOS plan and the data needs of global environmental Conventions.

b. Data and Information

154. In Africa ENRIN established eleven Geographic Environment Information Systems (GIS/EIS) units, five in the SADC sub-region. New environmental data from GRID were made available on request, or through Internet, for example, on global Digital Elevation Model (DEM) and nuclear facilities in Europe. GRID co-operating centres world-wide met 3000 requests annually for geo-referenced data, and responded to over 80,000 general information requests.

155. INFOTERRA National Focal Points met 60,000 requests annually for scientific and technical environmental information. UNEP produced guidebooks on sources of environmental information in: chemicals; waste management; environmental impact assessment; conservation and biodiversity; environmental legislation; and environment and development sources on Internet.

156. UNEP is establishing a UN-compatible telecommunications system (Mercure) for efficient management, dissemination and exchange of environmental information products, and is working toward the integration and harmonization of its information services through the establishment of UNEPnet.

c. Capacity Building and Servicing

157. ENRIN leveraged $17m dollars from donors to build sub-regional and national assessment and reporting capacity development in 34 countries, using $5.7m Environment Fund seed money: a 3 to 1 ratio.

158. INFOTERRA conducted regional training courses in the management of environmental information for 171 National Focal Points and also specialized courses in database management, library cataloguing, environmental information retrieval, and environmental information networking. The participatory process of preparing the first Global Environment Outlook report with sustained collaboration and support of regional collaborating centres contributed to building up their capacities to make environmental assessments.

d. UN System-wide Earthwatch

159. UNEP enhanced coordination among environmental information systems by participating in CEOS and supporting Global Ocean Observing System (GOOS), Global Climate Observing System (GCOS) and Global Terrestrial Observing System (GTOS). UNEP's coordination role in the UN system-wide Earthwatch helped create an increasingly integrated set of global environmental observing systems for land, water and air. In co-operation with DPCSD, UNEP prepared the joint Task Managers' report on progress of implementing Agenda 21's Chapter 40.

E.1.3 Outlook

160. The gap with regard to availability, quality, coherence, standardization and accessibility of environmental data remains wide between the developed countries and the developing and transitional economy countries. The dependence of developing and transitional economies on the data and information sources of the developed ones continues to cause concern and suspicion. Capacities in the former countries and regions need to develop rapidly for environmental assessment, reporting and information retrieval and dissemination. This should include monitoring, data and information compilation, database management and analytical facilities. Further, extending the scope of environmental data and information management to encompass policy-responses and the relationship between causal factors, environmental change and impacts, poses challenges for data coordination and analysis, which need to be addressed.

E.2 Regional Consensus-building and Co-operation

Reference: Chapter 38: International Institutional Arrangements, paragraph 23; paragraph 22 (h): regional and sub-regional cooperation; paragraph 29; Chapter 37: National Mechanisms and International Cooperation for Capacity Building; Rio Declaration: Principles 2, 3.

E.2.1 Approach

161. UNEP maintains Regional Offices in Africa (ROA), Asia and the Pacific (ROAP), Europe (ROE), Latin America (ROLAC), North America (RONA) and West Asia (ROWA). Through deliberate policy it enhanced the participation of its Regional Offices in Programme development and implementation, and reinforced their representational role. UNEP's Regional Offices are now more systematically involved in the assessment of environmental changes and needs at country and regional levels. They are involved as facilitators and enhancers of cooperation, not only with the Governments and with national and sub-national institutions, but also with relevant international, intergovernmental and nongovernmental bodies. In capacity building and in provision of information, advice and training, and in providing forums for consultation and consensus-building, UNEP's Regional Offices play a significant role, in partnership with the headquarters.

E.2.2 Achievements

162. UNEP Regional Offices participate in the development and implementation of all parts of the Programme; by way of illustration, only a few aspects of their involvement in Programme development and delivery are mentioned in this section.

a. Environmental Information, Assessment and Data

163. Each Regional Office convened regional consultations, with participation of Government representatives and experts, to review and discuss priority regional environmental issues and their impacts, the driving forces behind them, and the policy responses to address them, to contribute to preparing UNEP's first Global Environment Outlook report. Within the framework of the East African Action Plan, ROA helped complete a Coastal Resources Geographic Information System Database and maps for the Government of Kenya, which is a first phase for the development of an "East African Coastal and Marine Environment Resources Database and Atlas". ROE provided technical assistance to assess forest damage in the Czech Republic, Germany and Poland. ROWA worked with ESCWA on assessment of water resources in the region using remote sensing. ROLAC assisted in developing a computerized numerical model to assess the socio-economic impacts of climate change in Small Caribbean Island States. ROAP collaborated with ESCAP in preparing the regional State of the Environment reports and in developing the environmental database that backstops them.

164. ROLAC undertook an intensive process of sub-regional consultations to assess and develop environmental information systems on: integrated coastal zone management; integrated land management; integrated management of natural resources and the environment; and integrated watershed management, to develop a regional strategy, with specific sub-regional components, and to strengthen institutional capabilities for environmental data and information management. It has produced a regional roster of experts and institutions, an inventory of environmental and sustainability data availability, databases and digital maps, and a report on institutional environmental data acquisition and analytical capabilities in the region.

b. Consultation, Exchange of Experience and Dialogue

165. UNEP Regional Offices held ministerial, intergovernmental and expert meetings, consultations, seminars and workshops on a range of environmental topics of significance to the respective regions, to foster exchange of views, discussion, consultation and dialogue on issues, policies, practices, and priorities. For example, regional consultations were organized to facilitate the negotiations towards the adoption of CCD and to promote its implementation. ROE assisted in preparing a legal instrument for the protection of the Caspian environment, conducted workshops on the implementation of the CBD in the Baltic countries, and organized a forum on activities in support of the Climate Change Convention. Jointly with the Council of Europe, it has taken the lead to help countries implement the Pan-European Biodiversity and Landscape Diversity Strategy. It held an expert meeting on military activities and environmental damage, convened a roundtable discussion on sustainable production and consumption in Europe, and facilitated negotiations between Western European and North American countries on international biosafety guidelines. It assisted in identifying the environmental needs of Central and Eastern European countries with economies in transition, and prepared the UNEP action plan for the region, "UNEP in Europe". ROA, in cooperation with the OAU and ECA, continues to provide secretariat service to the African Ministerial Conference on the Environment (AMCEN), and helps AMCEN in maintaining its Science and Technology Network and Water Resources Network which provide support to Programme initiatives in the region. ROLAC holds regular ministerial consultations to ascertain issues and priorities in the region which, inter alia, help guide Programme development and delivery.

c. Information Networking and Training

166. ROLAC maintains an information system on environmental law which incorporates full-text sets of environmental legislation within the region and provides assistance to countries, in response to requests, in drafting environmental legislation. It operates the Environmental Training Network for Latin America and the Caribbean which helped establish consortia of institutions and thematic networks in environmental training. ROAP operates a Network for Environmental Training at Tertiary Level in Asia and the Pacific (NETTLAP). It enhances the capacity of tertiary institutions to meet the educational and training demands relating to efforts to achieve sustainable development. The network has 36 participating countries with over 200 tertiary institutions and 2000 individuals.

d. Advisory Services and Capacity Building

167. Each Regional Office has developed a Regional Advisory Service to respond to requests for advice and assistance related to environmental assessment and management taking into account regional needs. Regional Offices have contributed to the development of national and regional environmental and other issues-specific action plans. ROWA, in cooperation with ESCWA, assisted countries in the formulation of national plans to combat desertification. ROA took part in processes leading to the adoption of national environmental action plans and the formulation of strategies address environment and development concerns.

e. Awareness Building and Liaison with NGO's and Major Groups

168. ROAP, in collaboration with ESCAP, publishes the newsletter "Asia-Pacific Environment". It helped developing countries in the region to overcome some of the information and administrative barriers to working towards an early phase-out of ozone-depleting substances, through the establishment of an ozone officers' information network. It targeted women at the grassroots level to promote safe handling and use of pesticides and household chemicals and, in consultation with governments and media, developed an environmental communication strategy in the region. ROLAC initiated an information supplement Tierramerica which alerts readers to environmental issues with a view to stimulating public action. It is published bi-monthly in newspapers in Mexico, Chile and Ecuador. RONA has expanded its relationship with the NGO community by working with the advertising and marketing parts of industry to promote environmental sensitivity and encourage the development of environmentally-friendly products. It published "Ethics and Agenda 21" which brings together a collection of essays comprising the perspectives of leading environmental philosophers, theologians, ecologists and scientists. All Regional Offices develop and support national UNEP Committees in their respective regions to promote observance of environmental events and environmental awareness and action.

E.2.3 **Outlook**

169. Systemwide efforts to prepare regional environmental assessments and to build regional consensus on environmental priorities, policies and action need to be better harmonized, drawing on UNEP's regional presence. Action plans resulting from regional consensus-building processes have to be related to the means for their implementation. Standing regional inter-governmental bodies for environmental cooperation need to catalyze consistent guidance to the governing bodies of international institutions so that there is maximum mutual support among programmes to assist countries in the environmental field. Cooperation between UNEP's Regional Offices and the Regional Commissions, and between the former and specialized agencies' regional bodies, should encompass joint development and implementation of country level and regional action. It would be useful to monitor how countries' needs for environmental advice and assistance are being met based on teamwork among agencies. Regional co-operation also needs to assist countries in relating their compliance with global and regional environmental agreements to national action for sustainable development.

E.3 **Financing**

References: Chapter 1: paragraph 1.4; Chapter 33: Financial Resources and Mechanisms; Chapter 38: International Institutional Arrangements: paragraph 23.

E.3.1 **Approach**

170. UNEP's activities are mainly funded by Governments' voluntary contributions to the Environment Fund, which is supplemented by Trust Funds, counterpart contributions, and the United Nations regular budget. Recognizing the wide gap between resource needs to implement its Agenda 21 responsibilities and the resources available to it, UNEP established a Resource Mobilization Unit to: expand the donor base and solicit increased support from current donors; expand counterpart funding from all sources; and strengthen partnerships. UNEP's resource mobilization strategy includes: replenishing the Environment Fund; developing and mobilizing in-house capacity for resource mobilization; and enhancing collaboration with the private sector. As an implementing agency both for the Multilateral Fund and GEF, UNEP participates in processes aimed at raising new and additional resources to finance eligible activities relating to climate change, biodiversity, international waters and ozone layer.

E.3.2 **Achievements**

171. To help raise new and additional funds at various levels to implement Agenda 21, and also to enhance the sensitivity of financial and investment resources to environmental objectives, UNEP worked with representatives of the banking and insurance industries to develop a statement of commitment on Banking and Sustainable Development, with 91 signatories, and a Statement of Commitment to the Environment of the Insurance Industry, with 62 signatories. UNEP held an international roundtable and an outreach workshop and conducted surveys of practices to foster environmental sensitivity in investment and finance.

172. UNEP implemented a number of economy measures, including adjustments in Programme, staff and administration, to improve efficiency of resource management. It also introduced rigorous monitoring and evaluation of programme implementation and delivery. Further, it intensified dialogue with Governments on financing for the Environment Programme, its sources, levels, trends and use, and options for adequate and predictable financing for a Programme that will fully respond to countries' needs.

173. The sum total of voluntary contributions to the Environment Fund has declined steadily since 1993 and a smaller number of countries contribute to the Fund as compared to 1992. In view of the shortfall in resources, the Programme budget for 1996-97 will have to be reduced by over 30 per cent. The main policy issues concerning the Fund include: ensuring such levels of contributions as are commensurate with implementing the Programme as mandated by the Governing Council; broadening the base of contributors or "burden-sharing"; and ensuring correspondence between commitments and actual payments.

E.3.3 **Outlook**

174. Notwithstanding the facts that UNEP has: designed and delivered an integrated and responsive Programme since 1993; sought to systematically mobilize funds and counterpart contributions through various channels; implemented efficiency and economy measures; and introduced rigorous monitoring and evaluation procedures for enhanced accountability, the resources available to it for Programme delivery have decreased since 1993. Actors in the environmental field have multiplied and UNEP's resources have not kept pace with the demands on it for delivery of services. In view of the widespread recognition of the relationship between environment and development, and the increased involvement of development cooperation funds in the environmental field, UNEP needs to cultivate constituencies other than the traditional environmental ones to mobilize the requisite resources to help countries implement Agenda 21.

III. **Conclusion**

References: Rio Declaration; Chapter 2: International Co-operation to Accelerate Sustainable Development; Chapter 3: Combating Poverty; Chapter 4: Changing Consumption Patterns; Chapter 5: Demographic Dynamics and Sustainability; Chapter 8: Integrating Environment and Development in Decisionmaking; Chapter 14: Promoting Sustainable Agriculture and Rural Development; Chapter 38: International Institutional Arrangements; Rio Declaration: Principles 1, 5, 25.

175. The preceding sections convey how UNEP, within the framework of its mandate and available resources, has sought to implement Agenda 21. A sense of UNEP's own appraisal of where its action needs to focus more under each Programme element is conveyed in the sections on Outlook. The functions and responsibilities that Agenda 21 called upon UNEP to fulfil are wide-ranging. UNEP's Governing Council, with careful deliberation, has structured and prioritized the Programme to enable UNEP to do its best in responding to the needs of countries and institutions in implementing Agenda 21. UNEP made a sincere effort to ensure that the content, focus and manner of delivery of the Environment Programme were in line with the Rio Principles.

176. Some noteworthy features of UNEP's Agenda 21 implementation have been: strengthened and extended partnerships with international, intergovernmental, non-governmental institutions and the development community; a more decentralized and participatory approach to Programme development and delivery while accentuating the role of UNEP's Regional Offices; greater integration among sub-programme elements (e.g. freshwater, marine resources and coastal areas; land, forests and biodiversity; environmental information, assessment and toxic chemicals) in Programme design and delivery; a deliberate effort to relate Programme policy and design to promoting sustainable development, including its economic, social and human aspects (e.g. poverty; women; population; equity; international economic cooperation participation); a deliberate emphasis on sensing and responding to the needs of countries and institutions; a deliberate emphasis on achieving and monitoring results, and on the secretariat's accountability to the constituencies it is meant to serve; and a continuing emphasis on introspection on UNEP's niche in the evolving context of international environment cooperation.

177. UNEP since RIO has faced a remarkable challenge: Even as it has sought to maintain scientific and technical rigour in its work to continue to be the global leader in advancing international environment cooperation, it has also endeavoured to catalyze, the integration of environmental consideration in decisionmaking on development. UNEP has made substantive contributions to various forums and processes of development policy and cooperation, for example: women and development; population and development; social development; food security; consumption patterns; trade; and finance. UNEP has also sought to ensure that its Programme development and delivery respond to countries' development needs and concerns. Promotion of the "Fair Share" approach in the Water programme, the equitable sharing in the benefits of genetic resources in the Biodiversity programme, the participatory and community-based approaches to dryland management and desertification control, and responsiveness of the UNEP-implemented, GEF-financed projects in international waters, climate change and biodiversity to the recipient countries' development needs, are examples of this trend.

178. Information and database development and networking in various areas of environmental concern have helped UNEP better meet the needs of countries and institutions. Apart from knowing more about environmental issues and their significance, and the factors behind them, countries institutions and communities have to learn, as quickly as possible, from the experience of others to minimize the costs and the delays involved in putting into effect effective approaches, policies and practices. UNEP will systematically pursue this avenue further, drawing fully upon the capabilities of modern information technology, and its own strengthened regional presence. UNEP's traditional environmental assessment and monitoring work is also becoming more integrated with the analysis of trends, impacts and driving forces, and, consequently, more policy and action-oriented. UNEP will continue to build bridges and enhance the dialogue between science and policy.

179. UNEP has to sustain and intensify its networking with the scientific and technological communities to remain abreast of their work, and to help orientate the direction of research so that it will contribute most effectively to addressing priority problems. For example, technological research and development, and its wide application to enhance and sustain food production in moderate and low potential areas, without degrading their natural resource, base is a major challenge that has to be addressed. UNEP's capacity to provide technical and policy guidance to enable countries achieve better environmental management and environmentally sound development has to grow in order to respond to countries' needs. Policy in this context does not just refer to environmental policy in a sectoral sense, but it embraces the guiding framework for inter-sectoral development and coordinated action to address the causes behind environmental degradation and to help achieve sustainable development.

180. Beyond the enhancement of environmental awareness, information and knowledge, there is the challenge of building capacities and facilitating technical co-operation and technology transfer for environmental management and environmentally sound development. Although UNEP has endeavoured to respond as well as possible to countries' requests for assistance in capacity building, resource and staff limitations and insufficient coordination among agencies at the country level have limited its achievements and impact. In this regard, in partnership with UNDP and others, UNEP has given priority in capacity building to those areas which are most closely related to the effective performance of its mandated functions in respect of environmental information, assessment, database development, environmental legislation and institutions. UNEP needs to give greater attention to the building of capacities for policy development and coordination to help countries integrate environment and development considerations in decisionmaking.

181. UNEP's role as a builder of consensus among Governments on environmental policy and action will become increasingly critical as competition over natural resource use and access intensifies, and as transboundary environmental impacts significantly affect quality of life. Equally important, however, will be the systemwide promotion of compliance with international environmental agreements. The linkage of local and national development needs with global and regional environmental objectives needs to be systematically factored into projects and programmes aimed at implementing such agreements.

182. Agenda 21 recognized that there was "a need for an enhanced and strengthened role for UNEP and its Governing Council", and that "in order for UNEP to perform all of these functions, while retaining its role as the principal body within the United Nations system in the field of the environment, and taking into account the development aspects of environmental questions, it would require access to greater expertise and provision of adequate financial resources ..." UNEP continues to work closely, as a partner, with rest of the United Nations system, and with the Bretton-Woods institutions, and contributes fully to the work of the CSD to promote sustainable development. Regrettably, after RIO the financial resources and expertise accessible for UNEP have not grown, but instead have decreased. This has been a serious impediment to programme development and delivery. It is UNEP's hope that, as a result of the planned review of progress of implementing Agenda 21 at the General Assembly's Special Session, it will receive a well-focused and fresh mandate, along with an assured access to the financial resources and institutional framework that it needs to assist best the world community in implementing Agenda 21.

Annex

Index of Cross-References: Agenda 21 Chapters and Its Annexes and UNEP's Implementation Report

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PROGRAMME MATTERS

Mid-term review of the Programme for the Development and Periodic Review of Environmental Law for the 1990s and further development of international environmental law aiming at sustainable development

Preliminary study on the need for and feasibility of new international environmental instruments aiming at sustainable development

Note by the Executive Director

1. The Executive Director has the honour to present herewith for the information of the Governing Council the preliminary study on the need for and feasibility of new international environmental instruments aiming at sustainable development prepared pursuant to the request of the Governing Council in its decision 18/9, paragraph 5. The study received only limited consideration by an Expert Group Workshop on International Environmental Law Aiming at Sustainable Development, which was convened by UNEP and met in Washington, D.C. in November 1995 and in May and September/October 1996. It has been found that the study requires further elaboration.

2. The text of the study is reproduced as it appears in annex II of the final report of the Expert Group Workshop (UNEP/IEL/WS/3/2), which has already been circulated to all Governments in English, French and Spanish, the three working languages of the Workshop.

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Annex

PRELIMINARY DRAFT STUDY ON THE NEED FOR AND FEASIBILITY OF NEW INTERNATIONAL ENVIRONMENTAL INSTRUMENTS AIMING AT SUSTAINABLE DEVELOPMENT

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EXECUTIVE SUMMARY

The present study responds to the request in paragraph 5 of UNEP Governing Council Decision 18/9 of 26 May 1995 for the Executive Director to prepare a study on the need for and feasibility of new international environmental instruments aiming at sustainable development.

The study identifies principal challenges in the field of environmental protection and sustainable development and attempts to ascertain the need for and feasibility of new instruments to address those challenges. After noting the efforts that are currently underway to address some of the challenges that have been identified, the study recommends that UNEP take action in the following areas:

1. Prevention of marine pollution from land-based activities;

2. Protection, allocation and management of shared fresh water resources;

3. Regulation of hazardous substances and chemicals;

4. Climate change;

5. Interaction of international environmental law with other branches of international law;

6. Enhancing public participation in environmental decision-making processes and cooperation at the local level on transboundary problems;

7. Cooperation at the local level;

8. Forest loss and management;

9. Further development of concepts and principles in the field of international environmental law and sustainable development.

Some of the foregoing items are included in the list in light of their importance, even though new instruments are not recommended at this stage.

1. Introduction

In the context of the mid-term review of the Programme for the Development and Periodic Review of Environmental Law for the 1990s (Montevideo Programme II), the Governing Council, at its eighteenth session adopted decision 18/9 on 26 May 1995. In paragraph 5 of that decision, the Governing Council:

> "Requests the Executive Director, within available resources to prepare a study on the need for and feasibility of new international environmental instruments aiming at sustainable development, addressing, on a priority basis, the principal environmental challenges, including as they relate to the broader issues of sustainable development as set forth in Agenda 21, and, in fulfilling this task, to draw upon relevant work and activities of other United Nations agencies and international organisations."

The present study responds to this request of the Governing Council. 1/ In so doing, it seeks to contribute to the fulfilment of the mandate of Montevideo Programme II, in particular its programme area H, "Concepts or principles significant for the future of international environmental law". 2/ The study identifies the principal environmental challenges that may require international action on a priority basis, and examines the need for and feasibility of new instruments (section 2). On the basis of this analysis, the study makes recommendations for future action (section 3).

2. The Need for and Feasibility of New Instruments

(a) Introduction

This section examines the need for and feasibility of new international environmental instruments in the field of sustainable development. Concerns are sometimes expressed in relation to the number of international environmental instruments that already exist and problems of implementation and compliance with regard to those instruments. The present study recognizes the existence of those concerns and attempts to take them into account through specific criteria for determining need and feasibility,

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1/ The study draws, *inter alia*, upon: relevant decisions of the UNEP Governing Council; the 1992 Rio Declaration on Environment and Development, particularly Principle 27; Agenda 21, particularly Chapters 8, 38 and 39; the Montevideo Programme, including the Review of Montevideo Programme of 1 August 1991 and the Montevideo Programme II of 21 May 1993; relevant UNEP reports; relevant decisions and reports of the United Nations Commission on Sustainable Development; the discussions at the Expert Group Workshops on International Environmental Law Aiming at Sustainable Development, convened by UNEP in 1995-1996; global, regional and sub-regional conventions related to international environmental law and sustainable development; relevant soft law instruments; additional relevant work and activities of other United Nations agencies and international organizations; and recent literature.

2/ In particular, this study responds to the "activities" listed under that programme area.

identified below. After listing those criteria, this section undertakes to identify the principal environmental challenges and the types of instruments that may be appropriate to deal with them.

(b) Criteria for Determining the Need for and Feasibility of New Instruments

There is a broad range of factors that bear upon the *need* for new international environmental instruments aiming at sustainable development and the *feasibility* of those instruments. The criteria relating to these two issues may overlap somewhat, but in large measure they are separate. Even so, the feasibility of new instruments is, to a certain extent, a function of their need. That is, the existence of a high degree of need for a new instrument with regard to a particular challenge would generally mean that a number of the important criteria for feasibility would be met. Conversely, a low degree of need with regard to a particular problem would generally mean that a new instrument for that problem would not be highly feasible. This interrelationship between the questions of need and feasibility, and thus of the criteria for determining them, should be borne in mind in considering the following lists.

(i) Criteria for determining need

Criteria for determining the *need* for new international environmental instruments aiming at sustainable development include, but are not limited to, the following:

(1) whether there is a sound scientific basis for the elaboration of legal principles or rules concerning the challenge in question;

(2) the urgency of the challenge, including the nature and seriousness of threats to the natural environment, human health and development;

(3) the extent to which the challenge requires legal responses of a binding nature;

(4) the appropriateness of dealing with the challenge on the international, as opposed to the national level;

(5) whether a particular new regime would:

(a) promote integration of environment and development;

(b) be compatible with the existing system of international environmental instruments;

(c) add value to the existing system by filling well recognized gaps;

(d) enhance the coherence of international environmental law aiming at sustainable development; and

(e) have a positive impact upon issues beyond those directly related to the environment (e.g., international peace and security, human rights, public participation, indigenous peoples);

(6) the need for achieving greater clarification and uniformity through codification or systematization of existing principles; and

(7) the extent to which the challenge is dealt with effectively by existing instruments. This criterion includes such considerations as ratification records, the degree of compliance with the instrument, and its comprehensiveness and level of detail.

(ii) Criteria for determining feasibility

Criteria for determining the *feasibility* of new international environmental instruments aiming at sustainable development include, but are not limited to, the following:

(1) the extent to which there exists a social consensus 3/ with regard to the challenge and the way in which it should be addressed (if there is national legislation on point, this may be reflected in the degree of acceptance of a given regime or principle in that legislation, including how widespread that acceptance is 4/);

(2) the prevailing public policy of governments;

(3) whether there has been an express statement by the international community on the need for a new instrument or further development of an existing regime; 5/

3/ The idea of social consensus includes the positions on the question of individual members of the public, industry and non-governmental organizations.

4/ Examples of subjects that are increasingly being dealt with in national legislation include environmental impact assessment and the removal of lead from gasoline.

5/ For example the provisions in the Stockholm (Principle 22) and Rio (Principle 13) Declarations calling for developing the law of liability and compensation for environmental damage; those of Agenda 21 and the Montevideo II on principles of international environmental law; those of Agenda 21 on binding instruments on prior informed consent (chapter 19) and on the legal regime of protection of the marine environment from the harmful effects of land-based activities (chapter 17); that of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal on a Liability

(4) whether soft law on the subject already exists and is voluntarily applied, and the practice of its application suggests that a corresponding binding instrument would be advisable; 6/

(5) the extent to which financial resources would be necessary and available for the implementation of the instrument;

(6) whether an initial dialogue among Governments has already taken place; 7/

(7) whether there is an existing forum or legal framework for consultations and negotiations; 8/

(8) whether there is an existing understanding of the form a particular instrument might take, or of options for that form; 9/

(9) whether the appropriate geographical level (global, regional, sub-regional) of legal regulation has been identified; 10/

(10) the availability of sufficient capacity, including infrastructure and appropriately trained personnel, to address the challenge; and

(11) the extent to which already existing instruments are being implemented, and whether the addition of new obligations may be unduly burdensome on states.

Protocol; and that of the Convention on Biological Diversity on a Biosafety Protocol.

6/ For example, the possibility of transforming the amended London Guidelines for the Exchange of Information on Chemicals in International Trade into a convention on prior informed consent.

7/ For example, such as has been the case as to some issues during UNCED, CSD meetings, and UNEP Governing Council sessions.

8/ For example, the Conference of the Parties of the United Nations Framework Convention on Climate Change with regard to a possible Protocol or Intergovernmental Panel on Forests.

9/ For example, a Protocol under the United Nations Framework Convention on Climate Change; a binding instrument on forests.

10/ For example, the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, to be supported by regional agreements; the Bonn Convention on Migratory Species of Wild Animals to be developed through agreements between range States.

(c) Principal environmental challenges and types of instruments that may be appropriate to deal with them

This section first attempts to identify the principal environmental challenges facing the international community. It then considers the types of new instruments that may be appropriate to deal with those challenges.

There are several different categories of challenges, or problems, as to which there may be a need for new instruments in the field of environmental protection and sustainable development. Two will be focused upon here. The first category includes sectoral issues, that is to say, specific environmental problems such as air or water pollution. The second category has to do not with problems of the natural environment per se, but with the ways in which states address those problems. It includes the overarching principles and cooperative procedures applicable to environmental problems generally. In the light of these categories, this section takes into consideration not only challenges concerning specific sectors of the environment, but also those of a more general nature and those that may require new instruments containing principles and procedures applicable to environmental problems generally. While challenges are considered separately, it should be borne in mind that they are in fact interrelated to a large extent.

Initially, principal environmental challenges are identified without regard to whether they are currently being addressed in relevant fora. The rationale for this approach is the following: The fact that a particular challenge is being so addressed does not mean that the forum will succeed in producing an instrument, that any instrument produced will address the challenge adequately, or that the form of instrument that is adopted is the optimal one. Ongoing work on a given challenge will be taken into account in section 3 of the present study, in which specific action is recommended.

In order to keep the study within a practical scope, the time frame employed in identifying principal challenges in the field of the environment is the next phase of the Montevideo Programme II.

The criteria employed for identifying principal challenges in the field of environmental protection and sustainable development include the following: how well identified the problem or challenge is; the degree of scientific consensus concerning the challenge; the availability of solutions; whether the phenomenon in question is of an irreversible nature, and the time frame available within which the challenge may be effectively addressed; the impact of the challenge upon vulnerable populations; the impact of the challenge on security concerns; and whether a challenge or problem in fact exists in a given area, rather than whether or not that area is already the subject of some form of international instrument (for example, in some instances existing regimes may need to be strengthened, while in other areas no regime may presently exist).

Turning to the types of instruments that may be appropriate, the expression "new" instruments includes, for the purpose of this section, not only those that deal with a particular challenge for the first time, but also

those that improve upon regimes that are existing but inadequate, or that codify existing principles or rules, as well as those that address new issues.

The type of instrument that may be appropriate for a given problem will depend upon a number of factors, including the geographical scope of the problem, the presence or absence of existing instruments, the feasibility of addressing the problem on the global, regional, sub-regional or national level, and any other factors that may be relevant in the particular case.

The kinds of instruments that are available fall essentially into two categories: those characterized by the level at which they are adopted, i.e., the global, regional, sub-regional or national level; and those characterized by whether they are of a binding nature or not, e.g., treaties (binding "hard" law) versus guidelines (non-binding "soft" law). 11/ Thus each individual challenge or problem may be addressed in instruments on the global, regional/sub-regional or national level, and instruments on each level may be either of a hard-law or a soft-law nature.

As already indicated, the appropriateness of each kind of instrument to deal with a particular problem must be assessed according to all relevant factors. In some cases a combination of these kinds of instruments may be appropriate, such as a global framework of principles which is implemented through binding agreements on regional and possibly other levels. Even within a particular type of instrument there are different possibilities. For example, a global convention may contain a framework of principles, 12/ a more detailed regulatory regime, 13/ or may even contain provisions of both kinds. 14/ Similarly, soft law instruments may be of a more 15/ or less 16/ detailed nature.

11/ It is recognized that an instrument adopted in soft-law form, such as a United Nations General Assembly declaration, may in fact constitute a codification, or restatement, of existing principles of general international law. The emphasis in this study is upon the form of the instrument rather than whether a particular soft-law instrument may have some binding legal effect.

12/ For example, the Vienna Convention on the Protection of the Ozone Layer of 22 March 1985.

13/ For example, the International Convention on Civil Liability for Oil Pollution Damage of 29 November 1969.

14/ For example, the United Nations Convention on the Law of the Sea of 10 December 1982. This is also true of a number of environmental agreements that contain provisions of a general nature in the agreement itself and detailed provisions in annexes.

15/ For example, the "Friendly Relations Declaration," Declaration on Principles of International Law Concerning Friendly Relations and Co-operation Among States in Accordance with the Charter of the United Nations, United Nations General Assembly resolution 2625 (XXV) of 24 October 1970.

16/ For example, the "Outer Space Declaration," Declaration of Legal Principles Governing the Activities of States in the Exploration and Uses of Outer Space, United Nations General Assembly resolution 1962 (XVIII) of 13 December 1963.

Furthermore, there is a range of possible mechanisms for implementing the instruments in question. These include the establishment of lists of substances or activities to be regulated that may be easily and quickly updated; decisions of committees or other bodies; the use of annexes, protocols of provisional application, and similar techniques; action plans; financial mechanisms; mechanisms facilitating the transfer of technology; and mechanisms contributing to capacity-building.

Below are listed what are considered, on the basis of the criteria identified above, to be the principal challenges in the field of environmental protection and sustainable development on the international level, together with the type of instrument that may be appropriate to deal with each challenge. A brief explanation of the reasons for including each item is offered. Other challenges that are significant but are not considered to rise to the level of importance of the principal challenges are listed in Annex B. Types of instruments are identified without regard to any ongoing work with regard to a particular challenge, in order to provide a yardstick against which to measure whether that work is appropriate to deal with the challenge, according to the criteria set out above. The items are not listed in order of priority.

(1) Protection, allocation and management of shared fresh water resources

The United Nations has long recognized the importance of the conservation and harmonious utilization of internationally shared freshwater resources. Among the many meetings under held United Nations auspices at which this subject has been addressed are the United Nations Water Conference (Mar del Plata, 14-25 March 1977), the United Nations Interregional Meeting on River and Lake Basin Development with Emphasis on the Africa Region (Addis Ababa, 10-15 October 1988), and the International Conference on Water and the Environment (Dublin, 26-31 January 1992). Fresh water is the subject of an entire chapter of Agenda 21: Chapter 18, Protection of the quality and supply of freshwater resources: application of integrated approaches to the development, management and use of water resources. Programme area N of the Montevideo Programme II is entitled "Environmental protection and integrated management, development and use of inland water resources." One of the strategies contained in that programme area is to:

> "(a) Encourage the development of cooperative mechanisms between States including, as appropriate, international legal instruments for the protection and integrated management, development and use of transboundary water resources with a view to the prevention, reduction, control and reversal of their degradation and for the prevention and peaceful resolution of disputes between States".

In 1970 the United Nations General Assembly recommended that the International Law Commission (ILC, or Commission) "take up the study of the law of the non-navigational uses of international watercourses with a view to its progressive development and codification." 17/ The Commission later began work on the project, which was completed in 1994. In October 1996 the

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17/ United Nations General Assembly resolution 2669 (XXV) of 8 December 1970, paragraph 1.

General Assembly will convene a Working Group of the Whole to elaborate a framework convention on the basis of the draft articles adopted by the ILC. The growing scarcity of fresh water per capita is well known, as is the potential for international conflict over shared freshwater resources.

A global, framework convention with specific agreements for regions or shared drainage basins is recommended for the second challenge because of the dual needs in this field: first, to establish an agreed set of general principles and rules governing all international watercourses; and second, to apply and adjust those principles and rules to the unique conditions of each international watercourse and the needs of the states concerned. The reasons for the second need would not appear to require further elaboration. With regard to the first need, there are several reasons why an agreed set of general principles and rules should be established, including: to provide a model for states sharing international fresh water resources, indicating the factors that should be taken into consideration in their relations concerning those resources; to establish a basic set of norms, negotiated on the global level, for the guidance of states in the absence of a specific applicable agreement; and to anticipate and provide a legal framework for dealing with the growing problems that are likely to arise between states with regard to international watercourses.

(2) Climate change

Climate Change is addressed in Chapter 9 of Agenda 21, Protection of the Atmosphere. The Berlin Mandate, adopted at the First Session of the Conference of Parties to the United Nations Framework Convention on Climate Change in Berlin, March 1995, calls for the elaboration of a protocol to the Convention. The protocol would strengthen international efforts to deal with this all-important problem by establishing specific reduction targets and providing for financial assistance and transfer of technology to developing countries.

The problem of climate change is of such magnitude that UNEP should continue monitor efforts to deal with it and help to ensure that the process continues forward in an expeditious and scientifically sound manner.

(3) Transboundary air pollution

Chapter 9 of Agenda 21 is devoted to Protection of the Atmosphere. The fourth programme area addressed in that chapter is Transboundary atmospheric pollution. In that connection, Chapter 9 states that the programmes established under the 1979 Geneva Convention on Long-Range Transboundary Air Pollution, and its protocols, "need to be continued and enhanced, and their experience needs to be shared with other regions of the world." Programme area J of the Montevideo Programme II is entitled "Transboundary air pollution control". One of the strategies under that programme area is to:

> "(a) Consider the possible development of international legal instruments and mechanisms at appropriate levels for the prevention, control and reduction to acceptable levels of emissions causing transboundary air pollution and their effects".

The 1979 Convention covers the ECE region. There is a need in some, but not all other regions for agreements on the subject.

Regional agreements would be most appropriate with regard to this challenge. A global instrument would not seem necessary in view of the fact that a model already exists in the form of the 1979 ECE Convention. As mentioned above, Agenda 21 calls for the sharing of the experience with the 1979 Geneva Convention, and the Montevideo Programme II also identifies this as an important need.

(4) Cooperation at the local level on transboundary problems

Transboundary problems such as air and water pollution, waste water treatment, and the provision of safe drinking water are often best dealt with at the local level, between the concerned authorities on either side of the boundary. This approach is not only the most direct and often the most efficient, but it also helps to prevent essentially local or regional challenges from escalating into disputes between states on the international level. While no instrument is recommended with respect to this challenge, it is believed that UNEP could perform an important function in assisting states in the development of cooperative relationships between and among regional and local authorities of neighbouring countries, and, where appropriate, in the conclusion of regional agreements on the subject.

(5) Marine pollution from land-based activities

It is noted in Chapter 17 of Agenda 21 that "[l]and-based sources contribute 70 per cent of marine pollution . . . . Many of the polluting substances originating from land-based sources are of particular concern to the marine environment since they exhibit at the same time toxicity, persistence and bioaccumulation in the food chain. There is currently no global scheme to address marine pollution from land-based sources." That chapter recommends that states "[c]onsider updating, strengthening and extending the Montreal Guidelines [for the Protection of the Marine Environment from Land-Based Sources], as appropriate", and that they "[i]nitiate and promote the development of new regional agreements, where appropriate".

On November 3, 1995, a Global Programme of Action for the Protection of the Marine Environment from Land-based Activities was adopted by an Intergovernmental Conference that met for that purpose under UNEP auspices in Washington, D.C. The Conference also adopted the Washington Declaration on Protection of the Marine Environment from Land-Based Activities. Programme area O of the Montevideo Programme II is entitled "Marine pollution from land-based sources". The strategy under that programme area is, in part, to: "Cooperate in the development of regional treaties, protocols or other instruments regarding the degradation of the marine environment from land-based activities, where necessary . . . ." Finally, Article 207 of the 1982 United Nations Convention on the Law of the Sea is entitled "Pollution from land-based sources". Paragraph 4 of that article provides in part:

"States, acting especially through competent international organizations or diplomatic conference[s], shall endeavour to establish global and regional rules, standards and recommended practices and procedures to prevent, reduce and control pollution of the marine environment from land-based sources .... "

This provision of the 1982 Convention, which now has some 105 parties, constitutes an especially significant recognition of the need for concerted action with regard to this pressing issue.

A global action plan with binding regional agreements is recommended for this challenge because there is a need for both global goals and guidelines and binding regional agreements that tailor the global standards to suit specific regions. 18/ This is also the approach called for by Agenda 21, and is supported by Article 207 of the 1982 United Nations Convention on the Law of the Sea. A number of protocols have already been concluded under the Regional Seas Programmes. 19/ A global soft-law instrument is perhaps preferable to a binding convention for several reasons, including the greater feasibility of achieving the former, the difficulty of achieving agreement on binding global principles that apply to all regional seas, and the inherent advantages of an action plan, including its flexibility, its use as a goal-setting device, and the likelihood that it could command wider acceptance than a binding instrument.

(6) Protection of soils

The importance of protecting soils against degradation is reflected in action that has been taken to that end by a number of international organizations. In 1972 the Council of Europe recognized the importance of the problem by adopting the European Soil Charter. This was followed by a set of principles entitled the World Soil Charter, adopted in 1981 by FAO. Agenda 21 deals with soils in Chapter 12 entitled "Managing fragile ecosystems: Combating desertification and drought". Programme area B of that chapter is entitled "Combating land degradation through, inter alia, intensified soil conservation, afforestation and reforestation activities". It notes that desertification affects nearly one quarter of the global land area. Other forms of soil degradation, such as waterlogging and salinization, affect additional areas of land. Programme area K of the Montevideo Programme II is entitled "Conservation, management and sustainable development of soils and forests". One of the activities under this programme area is to:

18/ The fact that a Global Programme of Action has been adopted in this field is recognized in section 3 (c)(iii) below.

19/ These include: the Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-based Sources (Athens, 1980); the Protocol for the Protection of the Marine Environment Against Pollution from Land-based Sources (Kuwait, 1990); the Protocol for the Protection of the South-east Pacific Against Pollution from Land-based Sources (Quito, 1983); and the Protocol on Protection of the Black Sea Marine Environment Against Pollution from Land-based Sources (Bucharest, 1992). A draft protocol on the protection of the marine environment from land-based activities is currently being developed under the Wider Caribbean Action Plan.

"(a) Promote effective implementation of the Plan of Action for the realization of the goals and objectives of the World Soil Charter, including the preparation of guidelines for domestic legislation and related institutional mechanisms".

These instruments demonstrate clearly a broad recognition of the problem and of the need to increase efforts to deal effectively with it.

Global guidelines or a global declaration is recommended for this challenge because of the increasing importance of the problem on the global level. A binding instrument has not been recommended because, despite the importance of the problem, it may not be sufficiently understood on the political and social levels, either internationally or nationally, to merit such an approach. The recommendation would help to implement Programme area K of the Montevideo Programme II, mentioned above.

(7) Forest loss and management

Chapter 11 of Agenda 21 is entitled "Combating Deforestation". It recognizes that: "There are major weaknesses in the policies, methods and mechanisms adopted to support and develop the multiple ecological, economic, social and cultural roles of trees, forests and forest lands." 20/ There is widespread agreement on the need to strengthen efforts to deal with forest loss around the world. The Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests 21/ (Statement of Forest Principles) adopted at the Earth Summit were a first step, but must be followed by agreements on the regional level on the protection and management of forests.

(8) Regulation of hazardous substances and chemicals

International efforts to deal with the effects of hazardous substances and chemicals on human health and the environment have been stepped up as understanding of these effects has increased. In general, the growing chemical load on the environment is of concern. With regard to persistent organic pollutants (POPs), for example, work is underway, or has recently been concluded, by the Inter-Organization Programme for the Sound Management of Chemicals (IOMC), the International Programme on Chemical Safety (IPCS) and the Intergovernmental Forum on Chemical Safety (IFCS). The IFCS Ad Hoc Working Group on POPs adopted its final report at its meeting in Manila, Philippines in June, 1996, 22/ stating, *inter alia*, that international action, including a global, legally binding instrument, is required to reduce the risk to human health and the environment from releases of the twelve specified POPs. The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal applies only to hazardous wastes. Efforts are currently underway to put into binding form the amended London Guidelines on prior informed consent (PIC) with regard to chemicals in

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20/ Agenda 21, paragraph 11.1.

21/ A/CONF.151/26/Rev.1(Vol.I), Annex III.

22/ IFCS/WG.POPs/Report.1.

international trade. Provisions on export of domestically prohibited products could be included. There is a serious regulatory gap in this area with regard to radioactive wastes. Finally, there is emerging recognition of the threat to human and animal reproduction from endocrine disruptors. 23/

There appears to be a widespread recognition of a global, legally binding instrument on POPs. Regional instruments on this subject could also be appropriate in some cases. A global, legally binding agreement on prior informed consent (PIC) is also needed in this area.

(9) Interaction of International Environmental Law with other branches of International Law

One of the bases for action under Chapter 39 of Agenda 21 is:

> "(b) The need to clarify and strengthen the relationship between existing international instruments or agreements in the field of environment and relevant social and economic agreements or instruments, taking into account the special needs of developing countries"."

These efforts should address such matters as the compatibility and complementarity between multilateral environmental agreements 24/ and World Trade Organization (WTO) law; the resolution of disputes at the interface of trade and environment; ensuring that patents and other intellectual property rights, regulated by the TRIPS agreement under the WTO, are supportive of both the objectives of the Convention on Biological Diversity, as called for by article 16(5) of that convention, and technology transfer; and the relationship of international environmental law with international humanitarian and human rights law (e.g., Protocol I of 1977 Additional to the Geneva Conventions of 12 August 1949, arts. 35 and 55; also arts. 54 and 56 of that Protocol), as well as with the rules of international law governing mass movements of populations due to armed conflict. There is also a need for increased coordination of the efforts of different international bodies to deal with the interaction between international environmental law and other branches of international law.

It is recommended with regard to this challenge that UNEP focus in particular on the relationship between multilateral environmental agreements and WTO law. The fact that work is being done on this subject in the context of the WTO does not necessarily mean that there is no need for additional, or separate action. The work of the WTO in this area is being done from a trade perspective, as is appropriate for that organization. The problem should also be addressed from a perspective of environmental protection and sustainable development. UNEP is in fact already in the process of examining the trade impacts of multilateral environmental agreements. There is no

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23/ See generally Theo Colborn, Dianne Dumanoski & John P. Myers, Our Stolen Future (1996).

24/ Including the Convention on International Trade in Endangered Species of Wild Fauna and Flora, the Montreal Protocol and the Basel Convention.

reason to believe that the two efforts could not be complementary and mutually supportive, especially since the work in the context of the WTO has not yet come to fruition. 25/

(10) Public participation in environmental decision-making processes

Principle 10 of the Rio Declaration states that: "Environmental issues are best handled with the participation of all concerned citizens, at the relevant level." There is a clear need to improve the access of individuals at the national level to information concerning the environment held by public authorities, and to enhance the opportunity of individuals to participate in environmental decision-making processes.

The elaboration of internationally applicable principles relating to public participation in environmental decision-making processes is recommended for this challenge. Such an instrument could develop the principles contained in Principle 10 of the Rio Declaration. It could benefit from the experience of the OECD and ECE, and could provide a model for the negotiation of similar agreements in other regions.

(11) Coordination of institutional mechanisms in the field of the environment and sustainable development

The proliferation of secretariats in the field of the environment and sustainable development is a well-known phenomenon. Many new conventions are managed by their own secretariats, creating the possibility of overlapping competencies and duplication of effort. Calls have consequently been made for, *inter alia*, the coordination of the work of these bodies, in order to enhance the effectiveness of the efforts of states in the field of the environment and sustainable development.

These appeals should be supported. While the approach of consolidating secretariats may prove to be too politically controversial to be feasible, improved coordination of their activities would produce clear benefits and should not arouse significant controversy.

(12) Achievement of a common understanding and interpretation of concepts and principles in the field of international environmental law

Chapter 39 of agenda 21 is entitled International legal instruments and mechanisms. The first basis for action in Chapter 39 is:

25/ At the second session of the Commission on Sustainable Development, it was noted that close cooperation between GATT/WTO and UNEP was important, "in particular, when considering the relationship between the provisions and dispute settlement mechanisms of the multilateral trading system and those of multilateral environment agreements, including with respect to the question of compliance with trade provisions in multilateral environmental agreements negotiated under the auspices of the United Nations". These comments were reiterated at the Commission on Sustainable Development at its fourth session.

"(a) The further development of international law on sustainable development, giving special attention to the delicate balance between environmental and developmental concerns".

Programme area A of that chapter states that the "priorities for future law making on sustainable development . . . may include an examination of the feasibility of elaborating general rights and obligations of States, as appropriate, in the field of sustainable development, as provided by General Assembly resolution 44/228." One of the programme areas contained in the Montevideo Programme II is programme area H entitled "Concepts or principles significant for the future of international environmental law". The objective of that programme area is to "[f]urther develop, as appropriate, international environmental law."

Much progress has been achieved in the development and elaboration of concepts and principles on environment and sustainable development in recent major conventions, 26/ as well as in soft-law instruments, notably the Stockholm (1972) and Rio (1992) Declarations. 27/ While some of the principles contained in those instruments are undoubtedly of a legally binding nature, 28/ the status of others is uncertain. A common understanding and interpretation of concepts and principles in the field of the environment and sustainable development would promote environmental protection and sustainable development, and would assist states in their negotiation of new instruments. It is therefore recommended that work on the identification and further development of general concepts and principles in the field of environmental protection and sustainable development be continued, whether in meetings dedicated to this end or in the context of work on sectoral issues or on problems in the field. Governments should be assisted in the achievement of a common understanding and interpretation of concepts and principles in this field.

(d) Challenges that are being or have recently been addressed in various international fora

The following challenges identified above are currently being, or have recently been addressed in the international fora indicated.

26/ See, for example, the principles set forth in the United Nations Framework Convention on Climate Change, Article 3; and the Convention on Biological Diversity, Article 3.

27/ See also the Draft International Covenant on Environment and Development prepared by the IUCN Commission on Environmental Law in cooperation with the International Council of Environmental Law, IUCN *Environmental Policy and Law Paper No. 31* (World Conservation Union, 1995).

28/ This is in particular true of the principle that states shall not cause significant transboundary environmental harm, contained in Principle 21 of the Stockholm Declaration and Principle 2 of the Rio Declaration. The legal status of this principle has been confirmed most recently by the Advisory Opinion of the International Court of Justice on the Legality of the Threat or Use of Nuclear Weapons of 8 July 1996 (paragraph 29).

(i) Protection, allocation and management of shared fresh water resources

In 1994, the United Nations International Law Commission (ILC) adopted on second reading a set of articles on the Law of the Non-Navigational Uses of International Watercourses. On the recommendation of the ILC, the United Nations General Assembly, in Resolution 49/52, decided to "convene a Working Group of the Whole . . . to elaborate a framework convention on the law of the non-navigational uses of international watercourses on the basis of the draft articles adopted by the International Law Commission." 29/ This meeting will be held for three weeks in October, 1996. Work is also being done to develop regional agreements, including, for example, the sub-regional project on Lake Victoria under the UNEP/UNDP Joint Project on Environmental Law in Africa.

(ii) Marine pollution from land-based activities

The Global Programme of Action for the Protection of the Marine Environment from Land-based Activities was adopted on November 3, 1995, at the High-level Segment of the Intergovernmental Conference to Adopt a Global Programme of Action for the Protection of the Marine Environment from Land-based Activities. 30/ Also adopted at that meeting was the Washington Declaration on Protection of the Marine Environment from Land-Based Activities. 31/ In addition, there are ongoing efforts to develop an instrument on persistent organic pollutants (POPs). 32/

(iii) International trade in hazardous substances

Negotiations are currently underway on the subject of prior informed consent (PIC) in the field of chemicals. The negotiations are aimed at arriving at a binding instrument on the basis of the amended London Guidelines.

(iv) Compatibility of multilateral environmental agreements with WTO law

The subject of the relationship between the provisions of the multilateral trading system and trade measures for environmental purposes, including those pursuant to multilateral environmental agreements, has been under consideration for a number of years within the context of the GATT and the WTO. Currently, the WTO's Committee on Trade and Environment (CTE) is

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29/ United Nations General Assembly resolution 49/52 of 9 December 1994, operative paragraph 3.

30/ Document UNEP (OCA)/LBA/IG.2/7, 5 December 1995.

31/ Document UNEP (OCA)/LBA/IG.2/6, 5 December 1995, pages 16-19.

32/ This includes the work of the Inter-Organization Programme for the Sound Management of Chemicals (IOMC), which includes UNEP, ILO, FAO, WHO, UNIDO, and OECD; the preparation of the International Programme on Chemical Safety (IPCS) report on twelve short-listed POPs; and the Intergovernmental Forum on Chemical Safety (IFCS) Intersessional Group Meeting including its Expert Meeting on POPs, held in Manila, Philippines, 17-23 June 1996 on international action.

seized of the matter. The CTE will prepare a report to the first biennial meeting of the WTO Ministerial Conference scheduled to be held in Singapore in December 1996. Detailed proposals have been submitted to the CTE by Japan, New Zealand and the European Community. There is no comparable work being done by intergovernmental bodies whose mandate is chiefly in the field of environmental protection and sustainable development.

(v) Public participation in environmental decision-making processes

Work on a draft convention on public participation in environmental decision-making is currently in progress within the U.N. Economic Commission for Europe (ECE). This would be, by its nature, a regional instrument. It could, however, provide a valuable model for efforts to respond to Principle 10 of the Rio Declaration on a more general level.

3. Recommended Action

In light of the foregoing analysis, and taking into account work that is currently underway in the relevant international fora, it is recommended that competent international bodies, such as UNEP, take action in the following areas. 33/ Certain of these areas are included because of their importance, even though a new instrument is not recommended at this time, because the need for and feasibility of related new instruments should be further explored.

(a) Marine pollution from land-based activities: Where appropriate, elaborate and conclude regional protocols to implement the Global Programme of Action of 5 December 1995. 34/

(b) Protection, allocation and management of shared fresh water resources: Elaborate and conclude agreements or protocols concerning specific regions or international drainage basins. 35/

33/ These recommendations are not listed in any order of priority.

34/ See the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, document UNEP (OCA)/LBA/IG.2/7, 5 December 1995; and the Washington Declaration on Protection of the Marine Environment from Land-Based Activities, adopted on 1 November 1995 at the High-level Segment of the Intergovernmental Conference to Adopt a Global Programme of Action for the Protection of the Marine Environment from Land-based Activities; document UNEP (OCA)/LBA/IG.2/6, 5 December 1995, Annex II, pages 16-19. The Global Programme of Action contemplates, *inter alia*, the development of an instrument covering persistent organic pollutants (POPs).

35/ In elaborating these agreements or protocols, states may wish to take into consideration, *inter alia*, the framework agreement to be negotiated by a Working Group of the Whole of the Sixth Committee of the United Nations General Assembly, beginning 7 October 1996, on the basis of the draft articles on the law of the non-navigational uses of international watercourses prepared by the International Law Commission.

(c) Regulation of hazardous substances and chemicals: Elaborate and conclude a global legally binding instrument on persistent organic pollutants (POPs), as recommended by the Intergovernmental Forum on Chemical Safety (IFCS), and on prior informed consent (PIC).

(d) Climate change: Monitor efforts, in particular those being made through the appropriate legal instruments, to address climate change and help to ensure that the process continues forward in an expeditious and scientifically sound manner.

(e) Interaction of International Environmental Law with other branches of International Law: Strengthen cooperation between concerned bodies to ensure that environmental considerations, as well as agreements in the field of the environment and sustainable development, are taken fully into account in the development and application of other branches of law, in particular WTO law and regional agreements on trade and investment.

(f) Enhancing public participation in environmental decision-making processes: Undertake efforts to elaborate internationally applicable principles relating to public participation in environmental decision-making processes and to promote the incorporation of these principles into national laws, as appropriate.

(g) Enhancing cooperation at the local level on transboundary problems: Promote the development of cooperative relationships between and among regional and local authorities of neighbouring countries, and, where appropriate, the conclusion of regional agreements on the subject.

(h) Forest loss and management: Promote the elaboration and conclusion of regional agreements on the protection and management of forests, in the light of the Statement of Forest Principles.

(i) Further development of concepts and principles in the field of International Environmental Law and Sustainable Development: Continue work on the clarification and further development of concepts and principles in the field of environmental protection aiming at sustainable development, whether in meetings dedicated to this end or in the context of work on general problems or sectoral issues in the field of the environment and sustainable development. The achievement of a common understanding and interpretation of concepts and principles in this field should be promoted. Further consideration should be given to the importance of these concepts and principles for the elaboration of global and regional instruments in the field.

ANNEX A

Background

In 1982 the Governing Council of the United Nations Environment Programme (UNEP) adopted the Montevideo Programme for the Development and Periodic Review of Environmental Law. 36/ The Montevideo Programme has guided UNEP in the further development of environmental law, in particular through international legal instruments in the field of the environment.

On 21 May 1993 the UNEP Governing Council by its decision 17/25 adopted the Programme for the Development and Periodic Review of Environmental Law for the 1990s (Montevideo Programme II) as a broad strategy for the activities of UNEP in the field of environmental law for that decade. In that decision the Council also emphasized the role of UNEP "in the continued progressive development of international environmental law as a means for achieving wider adherence to and more efficient implementation of international environmental conventions, and for future negotiating process for legal instruments in the field of sustainable development, in accordance with paragraph 39.1(a) of Agenda 21."

In the context of the mid-term review of the Montevideo Programme II, the Governing Council on 26 May 1995 adopted decision 18/9. In paragraph 5 of that Decision, set forth in the Introduction to the present Study, the Governing Council requested the Executive Director to prepare a study on the need for and feasibility of new international environmental instruments aiming at sustainable development. The present study responds to that request.

36/ UNEP Governing Council decision 10/21 of 31 May 1982.

ANNEX B

Other Important Challenges in the Field of Environmental Protection and Sustainable Development

A. Challenges

1. Liability and compensation in the field of transboundary movements of hazardous wastes (Article 12 of the Basel Convention envisages elaboration of a liability protocol) 37/

2. Loss of biodiversity (issues remaining to be addressed include biosafety (a Working Group to develop a protocol on this subject was recently established), liability for damage to biodiversity, the relationship between intellectual property protection and the sustainable development objectives of the Convention, and the Convention's trade-related provisions)

3. Protection of the environment in times of armed conflict (the existing legal regime is fragmented; it needs to be made more coherent)

4. Threats to environmentally sensitive areas (mountains, wetlands, etc.)

5. Urbanization and population growth, problems of human settlements, including their growth, demographics, unsustainable production and consumption patterns

6. Transboundary air pollution (continue efforts to share the experience with the 1979 Geneva Convention on Long-Range Transboundary Air Pollution and its protocols with other regions of the world, and to develop of international legal instruments and mechanisms in those regions, as appropriate)

7. Emergency avoidance, preparedness and response (on the global level)

8. Protection of the environment in the global commons/areas beyond the limits of national jurisdiction

9. Biosafety: control of the introduction of alien species and of genetically modified organisms

10. Localized but recurring air pollution problems, especially in urban settings

11. Environmental damage caused by military activities outside of war.

37/ Cf. the International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, adopted on 3 May 1996 by the International Conference on Hazardous and Noxious Substances and Limitation of Liability convened by the International Maritime Organization in London from 15 April-3 May 1996.

B. Challenges listed under A, above, that are being or have recently been addressed in various international fora

1. Liability and compensation in the field of transboundary movements of hazardous wastes (the Conference of the Parties to the Basel Convention has established an ad hoc working group of legal and technical experts to consider and develop a draft protocol on liability and compensation for damage resulting from transboundary movements of hazardous wastes and their disposal; its fourth session met in Geneva in June 1996).

2. Biosafety: control of the introduction of alien species and genetically modified organisms (the Conference of the Parties to the Convention on Biological Diversity has decided to hold negotiations on this subject).